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All Advertisements intended for insertion in the current Month must be sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.



Subscribers will please note that our next issue will appear on August 16, not on the 15th, as usual. This will enable us to publish a supplement with that number containing a report of the papers and discussions at the Plymouth meeting of the British Pharmaceutical Conference on August 14 and 15.

Our columns of legal reports are this month extensive and important. We are able to publish special reports of several cases of permanent interest. Among them we may especially note another prosecution of a chemist for counter practice, defended by the Trade Association. The Apothecaries' Society, through its counsel, made some special pleading in regard to their liberal interpretation of their Act. Again the evidence had been got up by an informer. The judge was favourable to the prosecution throughout, but judgment was suspended until the result of the appeal case is made known.

Mr. Lamplough's case was judged last month in the Court of Exchequer. There was a division of opinion among the judges as to the liability of an article like Lamplough's Pyretic saline to medicine stamp duty, but the majority were in favour of the Crown. We believe that Mr. Lamplough will appeal to the House of Lords, especially considering that the Lord Chief Baron was so decidedly in his favour.

Vice-Chancellor Bacon has given judgment in favour of Dr. Mitchell in the suit of *Condy v. Mitchell*, in which the plaintiff wished to restrain the defendant from making "Condy's Fluid." The latter, however, it was proved, had all the rights of a partner, and was therefore entitled to make the article under that name.

In the case of *Thorley v. Thorley*, heard during the past month, an important principle was decided. The defendant is the brother, and the plaintiffs are the executors of the late Joseph Thorley. The plaintiffs tried to prevent the brother from manufacturing and selling Thorley's food. As the defendant proved that he had a perfect knowledge of the manufacture, and as the article had not been patented, and the name had not been registered, Vice-Chancellor Malins refused the motion, with costs.

Three cases of selling diluted spirit of nitre have been punished at Bradford. One of the defendants was a grocer, another a herbalist, and the third a chemist.

The Pharmaceutical Society have had on hand during the month two more cases of fraudulent registration, and one of personation at the Preliminary examination. Mr. A. Ritchie Hunter, who got off so easily in Colegrove's case, being again the leading offender.

Botanical students will notice, from our editorial notes, that we intend to give them a chance, next month, to compete for a prize. This will in no way interfere with our usual chemical competitions.

The Pharmaceutical Council has again discussed the desirability of inviting the proprietors of this journal to send a reporter to their meetings. The majority were opposed to such a course being taken, but the opposition was much less determined than on former occasions.

Among the papers announced for the next meeting of the Pharmaceutical Conference at Plymouth the one which will probably attract the most interest will be one by Mr. J. Eliot Howard, F.R.S., on "The Supply of Cinchona Bark as connected with the Price of Quinine."

The Manchester and Salford Sanitary Association will hold an exhibition of sanitary appliances at Manchester during the second and third weeks in August. It will be open to the public at a small charge, and is to include the usual class of exhibits. The meeting of the British Medical Association at the same place and time will add to the success of the exhibition.

Dr. R. H. S. Carpenter has, during the month, claimed the authorship of Dr. Lush's Medical Act Amendment Bill. He also says that the withdrawal of the bill was not in the least influenced by the action of the chemists and druggists, but was due to the supine or secretly hostile action of the Medical Council.

The Medical Defence Association held their first annual meeting on June 29, at the rooms of the Medical Society of London, Chandos Street, Cavendish Square. The council report the formation of branches in East Anglia, North of England, Sunderland, Nottingham, Shropshire, Mid Wales, West Cornwall, Accrington, and Forest of Dean. The association numbers about 400 members. The cash account shows a balance of 22l., and the council congratulate the association on the good work done.

In another column will be found a short report of the inaugural meeting of the London Chemists' Assistants' Association. There is no doubt that an association with the objects of the present one is much wanted in London. But at the same time the late hours of business, the distances to be travelled, involving the expenditure of time and money, are serious obstacles to the success of a central association. One noticeable feature in the proceedings was the uncertain sound given forth on the subject of early closing. The various speakers seemed fascinated, and yet afraid of it. While wishing the association every success, we think that they will require plenty of energy and patience. What they have done at present is rather characterless.

Mr. John Wade, of Pimlico, sent to the *Pharmaceutical Journal* of June 16 a letter on the subject of counter-prescribing. In it he proposed a short Act of Parliament, which, if it passed, would shortly introduce the millennium. However nearly his suggestions approach the ideal, they are very far from the practical. He proposes, among other things, that surgeons should be forbidden to have unqualified assistants to dispense their own prescriptions or to write them in cipher, and that prescriptions should not be repeated without a doctor's order.

Fifty-one chemists residing in Notting Hill and Bayswater have agreed to close their shops finally at 8.30 P.M., except on Saturdays, and to keep their shops entirely closed during the Sundays. We hope to see this example followed in other parts of London, followed shortly by a still further curtailment of the hours of business. The Bayswater and Notting Hill chemists have issued a circular to their customers announcing the change, and stating that, in cases of emergency, medicine may be obtained at all hours.

Hardly since the death of Prince Albert has any royal person been found to take such a real and enthusiastic interest in science as the present Emperor of Brazil. During his recent sojourn in London he visited most of the original scientific workers living in the metropolis. Few fashionable persons could show such a list of work done in a year as he accomplishes in a month. It would be interesting to discover how much of the intellectual pabulum which he swallows is digested.

The Society of Arts, which bestows annually the "Albert Gold Medal" "for distinguished merit in promoting arts, manufactures or commerce," has this year selected as the most deserving recipient "Jean Baptiste Dumas, member of the Institute of France, the distinguished chemist, whose researches have exercised a very material influence on the advancement of the industrial arts."

Mr. J. J. Griffin, F.C.S., the head of the well-known firm of chemical apparatus manufacturers, has died during the past month. He has been a Fellow of the Chemical Society since its inauguration more than thirty-five years ago. He is best known through "Scientific Handicraft," the useful and comprehensive catalogue issued by his firm.

The Nova Scotian pharmacists have inaugurated and obtained a charter for a pharmaceutical society resembling our own in aim and structure. The examination fee is \$5 (about a guinea), the annual subscription is the same; examinees must have served as assistants at least three years, and must have dispensed one year. The sale of poisons is restricted to members, but registration of the sale is not provided for. The poison schedule contains several articles included in neither of ours—phosphorus, creasote, nitric, muriatic, and carbolic acids, for example.

On Wednesday, June 4, the laboratory of Mr. Farmer, chemical manufacturer, at 10 High Street, Putney, was burnt to the ground. The property was insured.

The first step towards the general utilisation of the electric light has been at last taken. A Russian has invented a form of burner in which the carbons are parallel, and are only insulated by a layer of asbestos or vitrified kaolin. The invention has been tried at the West India Docks and other places, and with such marked success that on the first report gas companies' securities fell, in some cases as much as 16 per cent. within a week. The new candle is said to give a light equal to 100 gas burners.

The case of the Apothecaries' Company v. Shepperly is entered for hearing in the Exchequer Division of the High Court of Justice on November 2.

MEDICAL NOTABILITIES.

IN continuation of our series of portraits of eminent members of the medical profession we present this month the following:—

LIONEL SMITH BEALE, M.D., a philosophical physician whose fame is mainly associated with his microscopic researches. Dr. Beale is a voluminous author, and a prominent controversialist. He is one of the few scientific men whose faith is broader than the revelations of his microscope. He has taken a part in the Bastian-Tyndall Controversy on Disease Germs, in favour of Dr. Bastian. Dr. Beale is professor of pathological anatomy to King's College, and has been president of the Quætt Microscopic Society.

JOHN E. ERICHSEN, F.R.C.S., is a high authority on surgical matters. He is best known by his work on the "Science and Art of Surgery," which has already reached a fifth edition, but is also the author of several other works. For one of these—"On the Pathology and Treatment of Asphyxia"—the Royal Humane Society awarded him the Fothergill gold medal, worth 50 guineas. He is Fellow of the Royal Medical and Chirurgical Society, and of many others. He is Holme professor of clinical surgery and senior surgeon to the University College Hospital, and has been an examiner in surgery to at least three of the licensed bodies. He is a constant contributor to the various medical and surgical periodicals.

LUTHER HOLDEN has been for more than 30 years a Fellow of the Royal College of Surgeons, and is now a member of the council. He holds several posts in the various hospitals, and is a contributor to most of the medical and surgical journals.

BARNARD HOLT's researches and publications on the urethra and its diseases have made him well known to the profession. His various appointments have made him almost as generally known to the public. He is surgeon to the Royal Society of Musicians and to the Railway Passengers Assurance Co. He is F.R.C.S., Fellow of the Royal Medical and Chirurgical Society, member of the Pathological and Clinical Societies, and is connected with several other British and foreign institutions.

T. SPENCER WELLS has had an unusually active life, for he has been a surgeon in the Royal Navy, and was surgeon to the British Civilian Hospitals at Smyrna and Renikoi during the Crimean War. His best known writings are those on the diseases of the female reproductive organs. He is connected with a large number of societies in England, Belgium, France, and Sweden, and is at present member of the Council of the Royal College of Surgeons, and surgeon to the Queen's house hold.

The name of ERASMUS WILSON, if it had never before been known, has now become almost a household word from the fame of his liberality in offering to pay the cost of bringing to England Cleopatra's celebrated needle. He was born in 1809, and became a member of the Royal College of Surgeons in 1831, a Fellow in 1843, and a member of the council in 1870. He is one of the first authorities and most extensive writers of the day on diseases of the skin, and besides being professor of dermatology to the Royal College of Surgeons, has founded and edited from the commencement a quarterly journal of cutaneous medicine. The list of his writings is quite a lengthy one, and besides including numerous works on the skin, also include treatises on the Turkish bath, syphilis, the Continental spa food, and the history of the Middlesex Hospital. He has also edited several valuable works.

We shall be obliged if readers will suggest names of medical notabilities whose portraits they would like included in future groups.

THE CHEMIST AND DRUGGIST PORTRAIT GALLERY.



LIONEL S. BEALE, M.D.



JOHN E. ERICHSEN, F.R.C.S.



LUTHER HOLDEN, F.R.C.S.



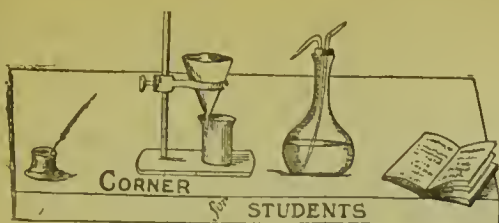
BARNARD HOLT, F.R.C.S.



T. SPENCER WELLS, F.R.C.S.



ERASMUS WILSON, F.R.C.S.



CONDUCTED BY RICHARD J. MOSS, F.C.S.

Analytical Exercise.

THE subject of the next exercise in qualitative analysis will be one of the chemical compounds of the Pharmacopœia. It is to be submitted to a systematic examination, the name of the substance ascertained, and a report made as to its purity.

Students who wish to compete should send us their names and addresses before the 20th inst. Samples of the substance will be forwarded on the 25th inst.

Students' papers will be received up to August 15.

ANSWERS.

Lithiæ Carbonas (B.P.), adulterated with an equal weight of potassium carbonate, was the subject of the last exercise: the impurities present in small quantities were iron (triad), calcium, and the hydrochloric and sulphuric radicals.

Several of our correspondents report this mixture "soluble in water." This will give a notion of the quantity of water that was used in the experiment, lithium carbonate being soluble in about one hundred parts of water. The difference in the solubility of the two constituents afforded a simple means of separating them sufficiently to show that there were two carbonates present: this circumstance, however, was not in every case utilised, for several students appear to have a weakness for at once obtaining a solution at all costs. In other words, they begin to take asunder the constituents of a mixture by mixing them together more thoroughly.

The fact that lithium was not in every case recognised by the crimson colour that its salts impart to the Bunsen flame shows that the reaction is not sufficiently well known. This is probably because lithium, notwithstanding that it is very widely distributed in nature, is often looked upon as a rare element, and treated as such in the course of chemical analysis. The ease with which it may be detected almost compensates for its scarcity, as, next to sodium, it is perhaps the most easily detected of the metallic elements. It is only with the aid of the spectroscope, however, that minute quantities of lithium are found in the presence of other substances capable of imparting a colour to the Bunsen flame, but when the quantity of lithium is relatively large the intense crimson of its vapour in a state of incandescence is highly characteristic and cannot escape notice. The colour is sometimes not observed until the platinum wire, with a fragment of the substance under examination, has been strongly ignited for a short time, when sodium, if not present in excess, is first volatilised. By employing the indigo prism or blue glass, the lithium colouration may be detected in the presence of that of sodium, but in this case one must be careful not to confound lithium with potassium. The characteristic reaction of lithium salts with sodium phosphate is not observed in dilute solutions, so that, before concluding that lithium is absent, the liquid which has been boiled with sodium phosphate must be evaporated to dryness, and the residue treated with water containing ammonia: if an insoluble portion remains, the flame test may be applied to it.

PRIZES.

The First Prize, for the best analysis, has been awarded to CHARLES THOMPSON, Bedworth, Warwickshire.

The Second Prize has been awarded to WILLIAM HART, jun., 99 Higher Bridge Street, Bolton.

Marks awarded for Analyses.

C. Thompson (1st prize)	95
W. Hart (2nd prize)	92
Eucalyptus	90
Aconito	85
Baniam	75
E. G.	73
A. B.	73
W. Buckley	73
Nil Desperandum	70
S. H.	70
J. P. H.	70
Carbonate	68
C. J. W.	65
Rivault	65
Sp. Gr.	60
J. B. B.	60
Potass. Iodid.	60
Country	60
Experientia Docet	55
Negator	50
J. J.	50
W. K. Inglis	50
H. J. Jackson	45
Mg.	45
Alpha	43
Blowpipe	40
Spes	20
Delta	20

TO CORRESPONDENTS.

* * All Communications should include the names and addresses of the writers.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

Baniam.—The traces of impurities are unimportant, but they afford a test of the care that is bestowed upon an analysis.

E. G.—The quantity of substance sent to each student is enough for several analyses. The examination of large quantities of material is only a waste of time and reagents, except when the chief object is the detection of substances present in minute quantity.

A. B.—The flame test indicated a mere trace of sodium, as the colouration lasted only for an instant.

W. Buckley.—Several substances, ammonia and magnesium, for example, might have been present. Your examination does not include tests that would have detected them.

Nil Desperandum.—See remarks to A. B.

S. H.—It does not suffice merely to show that certain substances are contained in the mixture; you must also prove that no others are present. You did not treat the aqueous solution with hydrochloric acid and hydrogen monosulphide; therefore the metals precipitated by these reagents were not proved absent.

J. P. H.—You were pretty correct in the substances you detected; it is, however, necessary to discriminate carefully between the chief constituents and the minor impurities.

Carbonate.—If you had examined the portion soluble in water and the insoluble portion separately, you could not have failed to observe that lithium was present in quantity.

Rivault.—The Adulteration Act does not contemplate anything so rash as the adulteration of potassium carbonate with lithium carbonate.

J. B. B.—If you make a mixture of the composition which you assign to the substance you examined, you will find that it behaves very differently when heated.

Potass. Iodid.—You might have made some attempt to name the substance.

Experientia Docet.—The mixture certainly did not char when heated.

J. J.—Platinum wire, not foil, should be employed to observe flame reactions.

W. K. Inglis.—You did not make a preliminary examination such as you will find described in any work on qualitative analysis. The calcium chloride precipitate obtained in the examination for acids was completely and readily soluble in acetic acid: your statement to the contrary is quite inexplicable.

H. J. Jackson.—You cannot have been familiar with the remarkable colouration of the Bunsen flame produced by lithium salts, or you could not have failed to detect this metal.

Delta.—Barium and the sulphuric radical could not exist together in a substance which was soluble in dilute hydrochloric acid, as barium sulphate is insoluble.

C. J. B.—We do not require the approximate quantities of constituents to be stated, but the principal constituents of a mixture must be distinguished from the minor impurities. In your May paper you stated "there is rather a large percentage of magnesium sulphate present." By this you surely do not mean a trace. The washing of filter paper is troublesome, but there is no other way of getting pure paper. English paper well washed, as described by Fresenius, answers very well.

T. H. B.—Thanks for your suggestions. We have scarcely ever had a paper good enough to be taken as a model; moreover, it is not our wish to place before students a scheme for the qualitative examination of substances, and thus save them the trouble of learning.

J. E.—Each student must apply separately for a sample of the substance.

Pharmacalia.

Madame de Stüel sets forth in "Corinne" the careless gaiety of the Neapolitans. She describes how the lazzaroni coil themselves in an osier basket and revel in the sunshine throughout the livelong day. She ascribes both their imagination and their light temperament to the weather, with its cloudless sky and the dancing buoyancy of the air. Far otherwise is it with us who live in the gloomier atmosphere of England: our gaiety is wrested from chilling external circumstances, and our abundant rainfall is sufficient to damp the most cheerful spirit. When, therefore, we were bidden to share in the night *soirée* at the Regent's Park Gardens we consulted the barometer before we could anticipate the pleasure. It did not actually pour on Wednesday, July 4, though the promise of the few previous golden summer days was not fulfilled. The London season had not quite ended, and there were carriages in long rows drawn up in the inner circle, while the suburban trains were crowded with visitors in correct evening costume, the fairer sex being clothed in miraculous folds of gauzy texture. Inside the garden there was a very pretty sight. Coloured lamps lit up the lawns, the main entrance was a blaze of white illuminated festoons, and there was a mingled sense of music, flowers, and ladies in happiest combination. The fashionable world assisted, and here and there a pharmacist. Royalty came late to grace the scene, whereupon the band struck up the National Anthem, and the electric light and rainbow fires reminded one of a continental fête. The more practically minded of the guests examined the flower decorations for the table and a novelty in the shape of floral arches for the sideboard. They were not seen in their first freshness, a circumstance which also detracted from the beauty of the rhododendrons. Young ladies viewed the bridal wreaths with an eye to future adaptation, and the bouquets for the ball-room, which, though doubtless after the last fashionable pattern, were of huge dimensions. We were pleased to see the introduction of grasses and wild flowers in the less pretentious arrangements, and our opinion is confirmed that a few flowers taken from the hill-side, tastefully put together and crowned with feathery grass and fern, may be made into a thing of beauty equalling the more elaborate constructions eked out with cut glass and mechanical appliances. A very striking and graceful table ornament was a finger-glass—the margin pinched in at intervals, so as to form a convenient orifice for the introduction of a small flower. It may interest those pharmaciennees who regularly read this journal to know that the latest mode is to decorate with same coloured flowers—all white and green (prize award) or blue and white, or other combinations, as fancy may direct. Just at the very crisis of the fête down came some spots which rejoiced the heart of every cabman, but the bad omen passed away with only a temporary fright. When on the following night the thunder rolled and the clouds burst, it is reported that Professor Bentley was discovered chanting a Te Deum.

* *

Wednesday, June 27, the Society of Arts held its annual general meeting, Lord Alfred S. Churchill being in the chair. The report presented was in some instances too euphemistic as respects some sections. The Cantor Lectures this year have not been listened to, as there stated, in a room well filled by earnest listeners; indeed, we might characterise the lectures on the "Chemistry of Gas Making," by Mr. Vernon Harcourt, as a failure, were we to judge by the scantiness of the audience, which sensibly diminished during the delivery of the course. On the other hand, the Indian Section has been raised into importance by a paper on "Indian Railways," by Mr. Juland

Danvers, though the nature of the subject, unfortunately, precludes any notice of its details here. Industrial chemistry has received a full share of attention. Mr. Kingzett has brought before the society his investigations on the oxidation of the turpentine and the products thereby obtained. These consist mainly of peroxide of hydrogen and camphoric acid. These inquiries have been commercially utilised for sanitary preparations. Mr. G. E. Davis has advocated a process for the better manufacture of carbonate or caustic soda. In obtaining these valuable additions to the alkali trade it is claimed that there is to be less waste and no nuisance. By the action of silicon on native phosphate of alumina and salt-cake, the inventor gets out silicate of alumina and phosphate of soda, which are easily decomposed. Both the merit and advantage of the scheme have been questioned by another manufacturer, and an animated controversy upon the subject has in consequence arisen. The ordinary placid character of the discussion which followed the reading of the report was disturbed by some not very complimentary remarks offered by certain members. One gentleman seemed to object to most things in general and to the conduct of the society in particular. He considered that Mr. Gladstone should have received the honour of the Albert Medal; that the proposed council list was ill-selected; that the expenditure of the funds had been injudicious, and that some portion of the money might have been expended on painting the outside of the house: members had decreased; the accommodation in the reading room was insufficient—so was the laboratory, and the journal was too expensive. A public anniversary is always a good thing, if viewed only as a safety valve for repressed excitement. Mr. Tennant, the veteran geologist of the Strand, was of opinion that never had the society been in a more flourishing condition during the past forty years. He commented on the excellence of the journal and the nature of its reports. Taking as we do great interest in matters at the Adelphi, we are bound to state how thoroughly we agree with the last-mentioned speaker. Time was when a melancholy sprinkling of visitors showed the low ebb of the influence of the Society of Arts. The Great Exhibition of 1851 had not yet called its full energies into play: its educational system, branching out into so many practical directions, had not been organised. Its dingy walls were untouched by the hands of Mr. Crace, and its library was a monotonous row of catalogues. Since then the almost superhuman efforts of the secretary, P. Le Neve Foster, have placed it in the front rank of London institutions, while the usefulness and often the brilliance of its Cantor Lectures have enlisted in its behalf the warmest recognition. Nowhere, we say advisedly, can the chemist and druggist get information better fitted to advance his trade interests or to keep him abreast with the commercial discoveries of the day. The weekly publication which bears the name of the society, and which also is a record of its transactions, is a model of the art of journalism; and the reading-room in John Street, situated a stone's throw from Charing Cross, may be frequented with advantage by all who seek in periodical literature for technical instruction.

* *

Lovers of the microscope, and there are not a few in the world of pharmacy, will read with interest an American review of the British and foreign instruments lately exhibited at Philadelphia. We are accustomed to look upon makers bearing the names of Ross, Beck, and others with an amount of awe which would disarm criticism, and it is therefore quite desirable that we should know what an M.D. of Philadelphia thinks of our apparatus. Dr. J. Gibbons Hunt has communicated his ideas upon the subject. He takes it for granted that a man is at liberty to speak of the result of work without extravagantly

raising the workman or treating him with indifference. He notes, in passing, show cases of too ornate description and massive fittings which he describes as brass elephantiasis. The approved form of the Ross instrument, in which the fine adjustment is removed from the upper and placed beneath the lower end of the body, is commended highly. "The distance between the ocular point and eye-piece is changed every time the fine adjustment is touched, and therefore the magnifying power is constantly varying and is perceptible under highest powers." But the stage is pronounced too thick, and the finish, though good, not of the best character. Beck's stand was excellent in finish, but the stage mechanically defective, having no adjustment for eccentric concentric rotation, and therefore seldom turning in the optical axis. Its mechanical arrangements need frequent re-adjustment. Mr. Crouch gains great praise from his reviewer for the excellence of his workmanship, and that while he has aimed at cheapness he has not sacrificed good work. His mechanical motions are commended and his instruments said to wear well. Dr. Hunt animadverted upon the makers of French microscopes, and congratulates his readers that the day is past when the American market was supplied with indifferent French productions. The Germans will scarcely be flattered with the notice of their instruments. They are said to be creations of deformity, "and speaking comparatively, are not instruments of precision at all. In the great struggle for the survival of the fittest, they will rapidly perish from sight, as rapidly as workers become obstructed in such things." Amongst American microscopes that of Zentmayer is described as being pre-eminent, and as having no superior. In his best stands the adjustable rotating concentric stage is used, an idea which is claimed as of strictly American origin. In a tolerably recent number of this journal an inquiry was made about students' microscopes, and we may therefore quote a few remarks bearing upon their choice. Entirely we agree with Dr. Hunt that it is a mistake to place bad tools in the hand of a beginner: better would it be to put inferior instruments in the hands of an expert, whose previous experience would eliminate such errors as he might detect. "Much of this class of work" (says the author) "sent from abroad [*i.e.* England] was so inferior that time would be wasted in speaking about it further." Great advances were noticed in the construction of objectives. Mr. Wenham's $\frac{1}{2}$ to the $\frac{1}{4}$ gave evidence of microscopical power hitherto undeveloped. Mr. Crouch's lenses were fine in field and definition for their cost. Beck's series was excellent in optical properties, while the mounting displayed in these and in the lenses of Mr. Wenham was pronounced unsatisfactory. The new $\frac{1}{2}$ of Powell and Lealand was ranked as the best of non-American objectives this investigator had yet examined. "Its corrections reveal a blueish-green light, and its definition marks an entirely new era in English microscopy." "The mechanical mounting and splendid finish of this grand objective should be a stimulus and admonition to other foreign makers to do likewise." Into the condemnation of the German objective we need not enter. Dr. Hunt states that they have the sole recommendation of being cheap, and though splendid discoveries have been made with the most inferior instruments, and researches of world-wide reputation have been made by celebrated microscopists with self-constructed apparatus, yet had working tools should not be offered to the student any more than had chemicals to the chemist. Let production be cheapened to the utmost, but not at the expense of optical performance.

This dull pharmaceutical month has been diversified by some minor novelties. From abroad we learn that the Municipal Council of Paris will have to consider a proposal for the competition to be instituted for the best method of cremation. The points aimed at in an amended process are, first, the perfect

carbonisation of the organic matters, without smell, smoke, or deleterious gas; secondly, precautions as to the identity and preservation of the ash without admixture; thirdly, economy and expedition must be studied, and the process indicated must not interfere with any religious rites. Such of our readers as may wish to turn their abilities for original research in that direction are respectfully informed that the competition will remain open from July to December, the successful plan to become the property of the City of Paris. A jury, named by the Prefect of the Seine, will be composed of 15 members, a third of whom must be selected from the Municipal Council. Rewards will not be wanting in order to encourage inventive skill. The first prize will be 1,000*l.*, the second 600*l.*, and the third 400*l.*

Also from abroad we glean that a strong effort is being made to develop still further in Paris and the great French towns the system of co-operative stores. This *Union de consommation*, as it is termed, has already been introduced, notably by the Orleans Railway Company. The grounds for advocating the extension of the system are based upon the working of the London Civil Service amalgamation, and on the character of its workmen. Here is the French description of our own institution:—"The members of the union are all functionaries or *employés* in the Government, that is to say, men whose character, and the regularity of whose lives, is guaranteed by their position. The directors of the union are exclusively elected from amongst the members of the union, which has one simple, unique and precise object—to buy wholesale goods of the best quality at the most favourable time, and to retail them to the shareholders at the lowest possible profit for ready money." Such a plan, it is urged, is based on principles that must ensure, or rather command, success, and the Parisians are exhorted to follow so admirable an example. That they will succeed financially no doubt need be entertained, but the grave consideration remains whether the establishment of these giant monopolies will be conducive to the welfare of a people rendered prosperous by small independent industries. It will be interesting to ourselves to observe whether pharmacy will be, or will not be, affected by this undertaking, and some sound argument respecting our own condition may be based on what will soon take place on the other side of the Channel.

From very much abroad indeed we get some Scotch information as to how the examinations for the council prizes should be conducted. A writer, signing himself "Auld Reekie," has unhurdened his mind by the expression of views which will meet with no approbation from the representative pharmacists of Scotland. He reverses the order of one's thoughts and accustomed modes of judgment, for his grounds for blame appear to us the strongest ground for praise. Former examiners, it would appear, have wandered out of their course in selecting, not the ordinary material to be found in text-books, or learnt in elementary classes, but such further branches of pharmaceutical knowledge as should form and test the advanced scholarship of the man who has passed his Major and gone beyond the rudiments of learning. The wording of the official notice makes it clear that candidates for these prizes must possess distinct qualifications, and those only are entitled to compete who have gained a certain rank and a higher intellectual standard. Such students would resent being placed on the level of an ordinary competitor. "Auld Reekie" has worked out his complaint in a fashion which his compatriots will repudiate, for he leaves his readers under an impression that the North is a region inaccessible to distinguished authors or to current literature. We think the examiners were rather to be

charged with leniency when they selected a question from a work with which no cultivated pharmacist was presumed to be unacquainted. It was like asking an Oxford student to give his notion of the Siege of Troy. The examination for the council prizes would become too easy, and would be held in light esteem if it dealt only with subjects which the author of the "Pharmacographia" has made as familiar as household words.

* *

Pleasant anticipations are conjured up by the receipt of the twin circulars which direct attention to the annual gathering of the British Pharmaceutical Conference. It is to be held this year, as probably all our readers know, at Plymouth: the date is fixed for August 14, and the place of meeting is the Athenæum. We need not enlarge upon the programme, as it is already in the hands of every member; still less need we state that the proceedings of the association will be under the effective and kindly guidance of Professor Redwood. Mr. Robert J. Clark, the local secretary, has issued a tempting and remarkably attractive sketch of the natural beauties to be found in that charming region, where hill and dale and moorland give an unrivalled character of levelness to the West of England. Positively to many of us the Conference will not come a day too soon, and no one is better entitled than the hard-worked pharmacist to snatch a brief relaxation from his exertions. The whole world, says Thackeray, drifts into August, and in that happy month man is at liberty. In that world may now be included even the chemist and druggist. Let us remind the younger generation, who are fond of lauding what in irony are called the good old times, that a fortnight every two years was the extreme point of permitted relaxation. How we congratulate those individuals who have no speech to make and no discourse to pronounce, but who can honestly enjoy their well-deserved holiday. To such of us as are condemned to live in London, it is more than refreshing to read of woods and laes and rustic shades, and dream of rivulet and wild flower. Should sylvan joys be not sufficient, there are Plymouth Sound, the famous Breakwater, Brunel's Tubular Suspension Bridge, the Stannaries, and the mines of iron and copper. To which manifold inducements must be added the proverbial warm-hearted hospitality of our western brethren.

* *

And now, to bring these notes to a termination without the record of the past month being incomplete, we must advert for a moment to the formation of the Chemists' Assistants' London Association. A meeting was held in favour of its establishment in the sacred precincts of Bloomsbury Square—indeed, in the lecture theatre—the chair being occupied by Mr. A. W. Postans. Business in the metropolis is so exacting that we rejoice in any proposal to increase the welfare of the town assistant. We need not hide from the promoters the difficulty of steering against the counter-attractions of a city like our own, and it is infinitely to the credit of the association that they should have ventured on this undertaking. We would advise the members not to bind themselves down to the production of too many papers, or even to aim too much at the scientific element. This will become wearisome, and will be found too great a tax. Rather let them cultivate that social feeling which at present is sadly wanting, and from which late hours and continuous work had separated them too long.

CANADIAN QUININE WINE.—In the Canadian official report of analyses of food and drugs we are told that quinine wine, which is an article of great demand in Canada, is found as sold to be a highly alcoholised wine containing gentian and nux vomica, with 20 per cent. of alcohol, and is therefore a powerful stimulant, instead of being a simple one.

THE PHARMACEUTICAL COUNCIL.

ALL the members were present at the July meeting of the Pharmaceutical Council, though several left before its conclusion.

It was first reported that Mr. Southall had accepted the duty of delivering the Inaugural Address to students in October next. A very satisfactory report of the Benevolent Fund Dinner was read, from which it appeared that as a consequence of the appeal then made a net sum of 1,606*l.* 5*s.* 2*d.* has been added to the fund. The sum of 30 guineas was voted from the Benevolent Fund, in addition to 20 guineas previously granted, for the purpose of buying a sufficient number of votes to get a certain child into an orphan asylum. Mr. Owen had the case in hand, and he believed that sum would be sufficient to ensure success.

Local secretaries and centres for Preliminary Examinations were appointed for the year.

The President reported communications from Government, from which it appeared that a Sale of Poisons Act was about to be introduced into Ceylon, with a schedule based on that of this country. Respectable persons will be licensed year by year to sell poisons.

Messrs. Carteghe and Linford were named as examiners for the council prizes. The labour is purely honorary, and it is intended every alternate year, or once every three years, to ask two gentlemen of the Scottish Board to undertake the duty.

The Law and Parliamentary Committee presented its report. The Trade Association had sent particulars of alleged infringements of the Pharmacy Act, and Mr. Churchill had endeavoured to overthrow the custom of the secretary sending a preliminary letter as a caution to persons who were alleged to have offended. On this point a discussion took place in the council, but it was ultimately resolved to continue this mode of procedure, the secretary stating that nearly every day brought information of alleged infringements, and he believed these letters had a good effect.

THE ADMISSION OF REPORTERS TO THE COUNCIL.

MR. HAMPSON moved:—

That it is desirable that the proceedings of the Council be reported by a reporter or reporters from the recognised journal or journals representing pharmacy and the trade, as well as by a reporter of the journal of the society.

Mr. Hampson referred to Mr. Betty's efforts in this direction five years ago, and anticipated his support now. He thought the reports in the *Pharmaceutical Journal* were well done, but he commented on the system which, to the surprise of several of the country members of the council, he made known for the first time, of sending round to town members of the council proofs of the reports for amendments. He thought if a perfectly independent report were published, a healthier tone would be established: it would remove the possibility of a whisper that they reported themselves, it would promote an interest in the affairs of the society, and he thought it would tend to check mere desultory talk. Mr. Hampson referred also to the Medical Council reports, which were independently produced.

Mr. CHURCHILL seconded the motion. He also testified to the fairness of the reports as they appeared at present, but thought a better impression would be conveyed outside, and greater interest in the council secured, if such pharmaceutical organs as desired it should send their own reporters.

Mr. SCHACHT supported the motion for a curious reason. The reports as now issued in the *Pharmaceutical Journal* he thinks so excellent that he regrets other reports are not like unto them. It was a fact, Mr. Schacht said, that there was another journal, which more or less professed to represent pharmacy, in which there were so-called reports of what took place at the council board. From whom the editor received the inspiration was a mystery to him, but it was an inspiration of a very curious sort indeed. He had often seen the most extraordinary exaggeration and misrepresentation of what speakers had said, which he was quite sure the editor would never have sanctioned with his eyes opened. This had always presented itself to his mind as a strong reason why he should have an opportunity of sending his accredited reporter to the meeting, and then the council would have a right to call him to account for what he did report, and he was quite certain he would be only too glad to avail himself of the opportunity. He also remarked on the privilege which it seemed some members of the council enjoyed of correcting the reports

of their observations. He had never enjoyed that privilege himself.

Mr. SHAW also supported the motion. He was not previously aware that London members had the advantage of revising their remarks.

Mr. GOSTLING was in favour of the resolution, but could not stay to vote for it.

The PRESIDENT said that Mr. Hanbury would have voted against it, but could not stay, so these two gentlemen might be considered to have paired.

Mr. BROWN supported Mr. Hampson's motion. He thought the reports should be regarded as public property, and ought not to be subject to revision after they had been written by the duly authorised reporter of any journal connected with the trade. He thought if reporters generally were admitted members would speak with more sense of responsibility, nor did he think that the council would lose in dignity or that any improper revelations would be made.

Mr. SANDFORD thought the council was to a great extent a private body, and he was not prepared to vote for the motion.

Mr. MACKAY suggested that before admitting outside reporters they might for a year try the system of admitting the editor as well as the reporter of their journal. They might perhaps then have reports which would more fully give satisfaction.

Mr. ATKINS had come quite open to conviction, and his impression was in favour of greater publicity. He thought cheroby misapprehensions would probably be avoided.

Mr. HILLS suggested that the resolution should be modified, to the effect that the proceedings of the council be more fully reported, and that the reporter of THE CHEMIST AND DRUGGIST be invited to attend.

Mr. BROWN remarked that the proposition was now merely abstract, and the means of carrying it into effect if passed would be for the consideration of a committee.

Mr. MACKAY's suggestion, seconded by Mr. BOTTLE, that Dr. Paul be admitted to the council meetings, was then brought forward as an amendment, but was afterwards withdrawn.

Mr. BOTTLE expressed his willingness to admit the reporter of THE CHEMIST AND DRUGGIST, but as no application for admission was before them he did not advocate that they should give people to send reporters. Besides, their journal was a valuable property, and the council reports were an attractive feature. He also remarked that the proceedings were not conducted in that strictly formal manner which would be creditable to the council.

Mr. BETTY intimated that he had changed his views on this point, and he could now acknowledge the better judgment of those older members who had modified his original proposals in regard to publicity. All who had spoken considered that the proceedings were fully reported. Persons outside did not think they were; but what had the members of the council to do with what others thought if their consciences told them they were in the right?—and no one could say they were not. Was the council to be like a criminal at the Old Bailey, afraid of what people might say of him, and constantly on his defence. A more subservient argument to adduce for altering the mode of procedure he never heard. So long as the council did its duty and was well represented by the journal, why in the name of independence should it trouble itself about what other people said? It was proposed to give the editor and proprietor of THE CHEMIST AND DRUGGIST—for no one else would want to come there—the privilege of sitting there and providing matter for that journal out of the reports of the council meetings. He contended that their own journal represented pharmacy and the trade, that it properly reported the proceedings of the society, and that it in fact was the only journal which did represent pharmacy free from the commercial element. He then proceeded to make some further comments, which he expressed a desire should not be reported, and concluded by saying he believed that if reporters generally were admitted members would feel such a restriction in speaking that the report would lose both in length and interest.

Mr. GREENISH would vote against the proposal for a precisely contrary reason. There was too much talk already, and he thought if another reporter was admitted there would be no end to the speeches.

Mr. CRACKNELL and Mr. ROBBINS both opposed the motion on the ground that it was necessary that the council should have some control over the reports.

Mr. OWEN was perfectly satisfied with things as they were. The PRESIDENT thought the time had not arrived for the

change. He was not quite so satisfied with things as they were. He would like a little more soul infused into the reports.

Mr. HAMPSON replied briefly. He urged that the presence of an independent reporter would tend to remedy some of the evils which had been spoken of, not to aggravate them. Speaking would be less desultory, and time would be saved. He was willing to make his resolution apply expressly to THE CHEMIST AND DRUGGIST, but in drawing it he had taken care not to allude to any particular journal. He did not believe that any journal which sent a representative to the council would sow discord, or introduce that state of havoc which Mr. Betty had prophesied.

The motion was then put, with the following result:—For—Messrs. Atkinson, Hampson, Schacht, and Shaw. Against—Messrs. Betty, Bottle, Cracknell, Greenish, Hills, Mackay, Owen, Rimmington, Robbins, Sandford, and Williams. The motion was therefore lost.

We may point out that, besides the four members who voted for the motion, three spoke in its favour, but left before the vote was taken, namely, Messrs. Brown, Churchill, and Gostling. Two of the majority, Messrs. Bottle and Hills, expressed themselves in favour of the admission of a reporter from this journal, while Messrs. Cracknell, Mackay, Sandford, and Williams, seem to be tending towards a similar opinion. Of the other members of the council, whose names do not occur in the division list, Mr. Hanbury seems to be decidedly opposed to the admission of other reporters, while Mr. Savage and Mr. Atherton, as we judge from former votes, would pair respectively for and against it.

LONDON CHEMISTS' ASSISTANTS' ASSOCIATION.

As announced last month, a meeting was held in the Lecture Hall, Bloomsbury Square, on the evening of June 28, to discuss the question of the establishment of an association for assistants as distinct from employers. Mr. A. W. Postans in the chair.

Mr. CARDWELL, M.P.S., Hon. Sec. *pro tem.*, read the report of the preliminary committee, congratulating the supporters of the movement on the progress hitherto made, and stating that donations towards the preliminary expenses had been received amounting to ten guineas. After deducting expenses a balance remained of about 3*l*. The report then detailed the efforts made in summoning this meeting.

Letters were then read from Messrs. T. H. Hills, J. Williams, R. Bentley, C. Umney, T. Greenish, M. Cartoighe, J. Moss, C. Hanbury, Wilmott, Andrews, and Martindale, in all but one case regretting their unavoidable absence, and wishing the association every success.

After some well chosen and suggestive introductory remarks, the Chairman called upon those present to give their opinion on the matter before them.

It was moved by Mr. BIDDISCOMBE, and seconded by Mr. STEPHENSON—

That this meeting feels the desirability of an organisation for the purpose of social intercourse and promotion of good feeling among chemists' assistants, and the discussion of all matters affecting their welfare.

It was then proposed by Mr. PRINCEP, and seconded by Mr. FOX,

That this want will be best supplied by the establishment of an association, to be designated "The Chemists' Assistants' Association," which shall provide rooms for the occasional discussion of scientific subjects, and at other times to be used as reading and smoking rooms by members.

Mr. HAMPSON, in supporting the resolution, said that he was quite sure that good would come of their meeting together. There might be rocks ahead of the association, but the very difficulty of steering would nerve and strengthen them for more serious conflicts. It was a good thing to unite together; it strengthened them and made them more apt to respect each other. Above all things, let them remember that the association and their own future depended entirely on their own efforts. If they had a dozen good men and true to work for it, the association was nearly sure to have a triumphant success.

The resolution was carried unanimously.

Mr. WALLIS then proposed the third resolution, to the effect

That having heard the intentions of the promoters of the association explained, this meeting pledges itself to do the utmost to secure the desired objects.

Mr. STEWART seconded it, and it was carried unanimously. Mr. MACKNIGHT proposed the fourth resolution—

That the thanks of this meeting be accorded to those gentlemen who have so willingly subscribed towards the expenses of formation;

and Mr. LONO, secretary to the Notting Hill Early Closing Association, said that he thought the association now proposed would be a good thing. He had found that his assistants wanted not only the time but the means for amusing themselves. They hardly knew what to do with themselves when they had their weekly holiday. It was much in the hands of the assistants what time they should close. If an assistant knowingly went to a place where the hours were long he ought not to grumble at them, and in the same way masters, when setting up in business, should not go where the custom was to keep long hours. He thought that masters used assistants as catspaws to rake a few more pence from the pockets of the public. The public will never think highly of us till we think highly of ourselves. Much money was spent and had been spent in England in releasing slaves: let them now set to work to take the chains off the trade of chemists and druggists.

Mr. BULL proposed and Mr. BAKER seconded—

That the secretary be instructed to convey the thanks of this meeting to the president and council of the Pharmaceutical Society for the loan of the lecture theatre.

The meeting then closed with a vote of thanks to the chairman, proposed by Mr. HETHERINGTON, and seconded by Mr. BARN. Numerous assistants enrolled their names as members. The meeting was enthusiastic throughout, and perfectly unanimous.

At a meeting of the members held in the Council Room, Bloomsbury Square, on the 10th inst., a code of rules was adopted and a council elected.

The following gentlemen are chosen as council for this year:—

PRESIDENT.	HON. TREASURER.
Mr. P. Princep.	Mr. J. McKnight.
VICE-PRESIDENT.	HON. SECRETARY.
Mr. C. Biddiscombe.	Mr. E. Cardwell.
COMMITTEE.	
Mr. Bull.	Mr. Stephens.
Mr. Coles.	Mr. Stuart.
Mr. Baker.	Mr. Wallis.
Mr. Marshall.	

A sub-committee was appointed to select a place of meeting, &c.

Provincial Reports.

IRELAND.

THE IRISH PHARMACEUTICAL SOCIETY.

THE monthly meeting of this society was held at the College of Physicians, Kildare Street, on Wednesday, July 4, Sir D. J. Corrigan, president, in the chair. The following were present:—Dr. A. Smith (vice-president), Mr. William Allen, Dr. Collins, Dr. Frazer, Mr. J. Goodwin, Mr. William Hayes, Mr. J. T. Holmes, Mr. S. Oldham, Sir G. Owens, Mr. Payne (Belfast), Dr. Ryan, and Professor Tichborne.

A letter was read from Professor Attfield, hon. secretary of the British Pharmaceutical Conference, acknowledging the receipt of a letter sent by the president and council of the Pharmaceutical Society, in reference to the meeting of the Pharmaceutical Conference in 1878, and stating that the letter should be laid before the committee of the Pharmaceutical Conference.

On the motion of Dr. FRAZER, seconded by Dr. RYAN, it was resolved:—

That the vice-president, Sir G. Owens, and Professor Tichborne should represent the council on the committee appointed to receive the British Association next year.

Proposed by Mr. PAYNE and seconded by Dr. RYAN:—

That the registrar be directed to write to the hon. secretary of the British Pharmaceutical Conference, informing him that the Pharmaceutical Society of Ireland propose to be represented at the Plymouth meeting by some of its members, and that the names of the gentlemen representing the society will be forwarded prior to the meeting.

Proposed by Dr. RYAN, seconded by Mr. TICHBORNE:—

That Mr. Payne be requested to forward the names of those members of the Pharmaceutical Society who purpose attending the Plymouth Pharmaceutical Conference to be held on August 14.

The Preliminary examination was held at the society's rooms on Monday, July 2. Eighteen candidates were examined: four failed; the following passed:—

William Henry Bowers, Dublin.	Stanley Harrington, Cork.
Walter Boyd, Loughlinstown.	Siegfried Hermes, 90 Ranelagh Road.
Francis Clendinning, Sandymount.	Robert Lawson, Dublin.
George Reginald Eakins, Cork.	Morgan A. McSweeney, Killyarnery.
Joseph Edmondson, Blackrock.	Robert Wagner Maxwell, Irish-town.
William Henry Gamble, Dublin.	Alexander Robert Smyth, North Strand.
Alexander Gordon, junr., 35 Ranelagh Road.	
William B. Harrington, Cork.	

The first examination under the extended code took place on Wednesday, July 4. There was only one candidate for examination, viz., Charles Evans, 29 Molesworth Street, Dublin, who passed.

The following were admitted to membership:—

William Rutherford, M.D. and L.A.H., Ballinasloe.	Samuel John Conolly, Athy.
Richard A. H. Donovan, Blackrock	Charles H. Griffin, 86 Sandymount Road.

APPROXIMATE QUANTITATIVE TESTS.

By J. BARKER SMITH.

Sixth Paper.

CHEMICALS (b).

Ferrum.—Ferrous salts only are directly estimated by the permanganate. A few peculiarities attending the reaction may be mentioned. If the ferrous solution be only slightly acid, two stages remote from each other are noticeable, the first characterised by the disappearance of the tint, the second by the solution becoming clear. Several cubic centimetres of acid being added in each estimation, the end of the reaction is more easily determined. The addition of the ferrous solution to decolorisation of the permanganate, and the text-book method of adding the permanganate to the acid ferrous solution until a permanent tint remains, do not give identical results. The former method may be used as an index, the second for the actual determination. The first experiment affords an illustration:—Iron wire, 1 gramme, dissolved in dilute sulphuric acid, and the solution diluted to a litre. To decolorise the 50 c.c. permanganate six cubic centimetres of the solution were required. Again, 6 c.c. of the ferrous solution were placed in the flask with an equal volume of dilute sulphuric acid, and the permanganate added until a permanent tint was produced. To effect this 42 c.c. were necessary, so that the standard 50 c.c. would be equal to 7.1 c.c. ferrous solution. One molecule of permanganate and four molecules of iron are represented in the reaction. And $224 (56 \times 4) \div 31600 = .007$ gramme. A reference to the Pharmacopœia will show to what extent theoretical results are expected to be realised. The numbers following the names of the ferrous salts here given relate, the first to theoretical results, the second to those obtained by the estimation of commercial samples.

These numbers represent fractions of a gramme; hence, multiplied by a hundred, the product would show the cubic centimetres required if a one per cent. solution of the ferrous salt were used:—

Ferrum Redactum, .007 and .010, or 70 per cent. *Ferri Sulphas*, .035 and .037. *Ferri Sulphas Gran.*, .035, not examined. *Ferri Sulphas Exsicc.*, .021 and .033. *Ferri Phosphas*, .015 and .05, nearly .03 expected. *Syrupus Ferri Phosphatis*: if 15½ drachms are diluted to 100 c.c. a one per cent. solution of the phosphate will be obtained. *Ferri Carbonas Sacch.*, .036 (35 per cent. ferrous carbonate) and .044. *Ferrum Iodidum*, data not applicable to the estimation.

Sode Hyposulphitis.—Hyposulphite of soda, ferrous sulphate, oxalic acid, and arsenious acid, are salts useful for the titration of the permanganate. The quantity of a one per thousand solution required to decolorise the permanganate was 6 c.c. Decolorising power, consequently, .006 gramme.

Potassii Iodidum.—Method, rather than the general utility of the test, perhaps will be the best excuse for submitting the iodides to the permanganate estimation.

The disappearance of the colour of a hydrogen flame seen through the small flask of permanganate, or the spectrum of the flask and its contents thrown on a sheet of white paper, will help to determine the end of the reaction in strong solutions. The precise method followed may be to put 40 c.c. of a one per cent. solution of iodide into a flask, acidulate, and add the permanganate until the faintest rose tint is produced, and then calculate what the 50 c.c. standard permanganate would require. Experiments determined '014 to '016 as decolorising power. One molecule of permanganate and three molecules of iodide would be '015 gramme.

Ferrum Iodidum.—The ferrous salt is converted into ferric during the reaction, but experiment determined that the chemical changes were not the same as in other ferrous salts. Iodine, 1 gramme, iron, q. s., and subsequent dilution with pure water to 122 c.c., represent a solution which ought to contain about 1 per cent. of iodide. One c.c. of this solution diluted to 100 c.c. will afford a one per cent. solution of iodide: the average of several experiments gave 146 c.c. as the quantity required to decolorise. If two molecules of permanganate and three molecules of ferrous iodide react, theoretical decolorising power would be '0147 gramme.

Syrupus Ferri Iodidi.—Three fluid drachms 36 minims diluted to a litre will represent a solution of one per thousand iodide of iron. Samples examined gave from '010 to '012 for the ferrous iodide.

Antimonium Tartaratum.—Hydrochloric acid is freely used in antimonial estimations. A one per thousand solution of tartarised antimony gave '018 gramme as decolorising power. Two molecules of permanganate and three of emetic would be '016 gramme.

Liquor Antimonii Chloridi.—If the sulphides, after prolonged treatment with hydrochloric acid, give a decolorising power of '008 gramme, the solution of antimony should be at least '032 gramme. A sample gave '3 gramme, specific gravity only 1'25, and in nowise approximated to the official yield of sulphide. The oxides and their preparations may likewise be estimated after treatment with acid tartrate of potash.

CHEMICALS (c).

Organic acids and their salts may be approximately estimated by the permanganate. This group differs from all the others by the application of heat. Half the quantity (25 c.c.) of permanganate, with 2 c.c. dilute sulphuric acid, are brought to boiling point, and the solution of the organic salt regularly added to complete decolorisation. The flask should be well shaken.

Acidum Citricum.—Several experiments were tried, and the quantity of sulphuric acid varied. Of a one per thousand solution of citric acid, or the same neutralised by potash, 4'8 c.c. were required to decolorise the standard 50 c.c. permanganate. Decolorising power, '0048 gramme.

Succus Limonis.—One cubic centimetre of fresh juice diluted to 100 c.c. with pure water afforded a solution of which 4'8 c.c. decolorised. This would indicate a juice equivalent to nearly 10 per cent. of citric acid. Several cubic centimetres of actual lemon juice would be required to decolorise the permanganate at ordinary temperatures, hence the detection of many impurities.

Potasse Citras.—An ordinary sample showed a decolorising power of '015 gramme. A comparison with the citric acid experiments would demand a higher power for this salt.

Acidum Tartaricum.—Of a solution containing one per thousand 5'7 c.c. were required to decolorise the 50 c.c. permanganate. Decolorising power, '0057 gramme.

Soda Tartarata.—Of a one per cent. solution 2'4 c.c. decolorised. Decolorising power, '024 gramme.

Acidum Oxalicum.—Of a one per thousand solution 9'6 c.c. decolorised. Decolorising power, '0096 gramme.

Acidum Malicum.—Of a one per cent. solution 4 c.c. decolorised. Decolorising power of this purchased sample, '04 gramme.

THE BRITISH MEDICAL ASSOCIATION AND AN EXHIBITION OF SANITARY APPLIANCES.

THE next congress of this association will be held in Manchester, at Owens College, on the 7th, 8th, 9th, and 10th of August. The president-elect is Dr. M. A. Eason Wilkinson, senior physician to the Manchester Royal Infirmary, and the readers of addresses will be Dr. William Roberts, F.R.S., who

will give the address on medicine; Mr. T. Spencer Wells, F.R.S., who will give that on surgery; and Dr. Robert Barnes, F.R.C.P., who will give that on obstetric medicine. There will be many foreign visitors, among others MM. Charcot (Paris), Worms (Paris), Loilet, Olier, Chaveau, Bamberger (Vienna), Ludwig (Leipsic), Herman (Zurich), Roussell (Geneva), and Marion Sims. Sir William Jenner is the president of the Medicine Section, Mr. E. Lund of the Surgery, Dr. W. O. Priestly of the Obstetric Medicine, Surgeon-Major F. S. B. De Chaumont of the Public Medicine, Dr. Arthur Gamgee of the Physiology, and Dr. J. C. Backnill of Psychology. The town will give the association a public welcome, and there will be much private hospitality. The association has twice before visited this town—in 1836 and in 1854. On the first occasion the association numbered 600 members, on the second 2,000, while this year it numbers upwards of 7,000 of the leading practitioners spread over the kingdom.

In connection with the meeting the Manchester and Salford Sanitary Association will hold an Exhibition of Sanitary Appliances from August 6 to 18 inclusive, within the grounds of Owens College. The exhibition will be open from August 6 to 11 to members of the British Medical Association on presentation of their tickets of membership; to the members of the North-Western Association of Medical Officers of Health, and members of the Manchester and Salford Sanitary Association on presentation of tickets which may be had on application at the office of the association, 78 Cross Street; and from August 13 to 18 to the general public on payment of 1s. each at the door.

The exhibits will be arranged in the following classes:—

1. Drainage and disposal of refuse.
2. Sanitary architecture and building—including plans and models of dwelling houses, public assembly rooms, hospitals, &c.
3. Water supply, ventilation, disinfection, heating and lighting.
4. Smoke consuming apparatus; and methods for the purification of polluted rivers.
5. Food, clothing, and personal conveniences—including specimens of pure and adulterated food, baths, &c.
6. Disposal of the dead, by burial and cremation.
7. Sanitary literature.

Miscellaneous articles not named specifically above will be arranged in the classes to which they are most closely allied.

A small charge is made to exhibitors. The last date for receiving applications for space is the 16th inst.

A NEW METHOD FOR THE QUANTITATIVE DETERMINATION OF SUGAR IN BLOOD.

By F. W. Pavy, F.R.S.

DR. PAVY read a paper on June 14, before the Royal Society, in which he described minutely his new method for the quantitative determination of glucose and its application to physiological relations of sugar in the animal system. The accurate results which Dr. Pavy has succeeded in obtaining by means of his new gravimetric process of analysis, and the importance of the subject itself, are such as will tend to advance materially our knowledge, and hence will substantiate and extend the position with regard to the treatment and pathology of diabetes.

The paper consisted chiefly of a description of the method which the author adopted for accurately ascertaining the amount of sugar in the blood of animals.

His method is as follows. To observe

1. The natural state of the blood.
2. The comparative state of arterial and venous blood.
3. The spontaneous change ensuing in blood after its removal from the system.

Before describing his own gravimetric system, Dr. Pavy proceeded to criticise Bernard's new volumetric process, which has been described fully in recent issues of the *Comptes Rendus*. This method the author proved to be not only devoid of precision as a quantitative analytical process, but was in itself calculated to give rise to fallacious results, inasmuch as keeping the suboxide of copper dissolved by means of organic matter was fundamentally wrong. The entire system was based on errors

and the results were necessarily incorrect; two of these errors the author dealt with somewhat in detail. The first was in the assumption that the volume of trial liquid corresponds in c.c. with four-fifths of their weight in grammes of the mixture of sulphate of soda and blood. In practice it was found that the actual relation between the volume of liquid obtained and the weight of the mixture employed must vary in each individual case, according to the solid matter existing in the particular specimen of blood and the loss of liquid by evaporation during the separation of the coagulum by heat. The other error in Bernard's method arose from the influence which organic matter exerted in preventing the deposition of suboxide. The large addition of potash which is employed in this process, viz., from 20 to 25 cubic centimetres of a concentrated solution to one c.c. of the copper test, acts upon some one or other of the organic principles left in the liquid obtained from the blood, and prevents the deposition of suboxide of copper.

The author then proceeded to describe his own new gravimetric process, in which he adopts the use of a galvanic battery for effecting the deposition of copper which has been reduced by the sugar in a form to be susceptible of weighing. The details of this method are, shortly, as follows:—

A certain volume of blood—about 20 c.c. forms a convenient quantity—is taken for analysis, and first mixed with 40 grammes of sulphate of soda: the whole must be subjected to weighing in detail, so that the precise weight of the blood taken may be known. To this mixture, contained in a beaker of about 200 c.c. capacity, about 30 c.c. of hot concentrated solution of sulphate of soda are added, and the whole contents heated until a coagulum is formed.

Filtration is then performed, and the coagulum thoroughly washed, so that all traces of sugar may be removed. The liquid thus obtained, from having been run and squeezed through muslin, is slightly turbid, and must be boiled again and filtered through paper to render it perfectly clear. It is now ready for the application of the copper test. Being brought to a state of ebullition, about 10 c.c. of the potassio tartrate of copper solution, or sufficient to secure that the test liquid is left in excess, are added, and brisk boiling continued for a minute, but not longer. In this way a reduction of the oxide to the suboxide of copper is effected by the action of the sugar present in the solution.

The liquid is then filtered through a plug of asbestos, or, what is better, glass wool. The suboxide, having been collected and washed from excess of the copper test liquid, is next dissolved by a few drops of nitric acid, a small quantity of peroxide of hydrogen having been previously added in order to effect oxidation and consequent ready solution.

The copper present in the liquid is now deposited by the agency of galvanism. The positive pole of the battery is formed by a platinum spiral coil, around which and forming the negative pole is a cylinder of platinum foil; upon this the copper is slowly deposited in a pure metallic form. This operation is continued until the appropriate test shows that the whole of the copper has been thrown down. The period ordinarily required to effect this does not exceed 24 hours.

The platinum cylinder is next removed, and instantly plunged first into distilled water, and then into alcohol. After drying in a water oven, it is ready for weighing: the difference in the weight of the cylinder before and after the operation gives the amount of copper deposited.

The battery used is a modification of Fuller's Mercury Bichromate Battery, and has been selected on account of the constancy of its action.

From the amount of copper deposited, that of the sugar existing in the blood analysed may be accurately calculated. Five atoms of the cupric oxide of the test solution are reduced by 1 atom of glucose: it follows that 317 parts of copper represent the equivalent of one part of glucose, or the relation stand as 1 of copper to 0.5678 of glucose. Therefore, to ascertain the amount of sugar the weight of the copper has to be multiplied by 0.5678. This application of the copper test solution yields a gravimetric instead of a volumetric process of analysis, and one which has no uncertainty belonging to it. There is nothing for the mind to decide, and no opportunity for error of judgment, as may be the case to a slight extent where a gradual fading of colour, as in the volumetric process, has to be watched until the attainment of the proper point of the decolouration has been effected.

The accuracy and reliability of the foregoing process are strongly supported by the uniformity in the results obtained

from a large number of experiments. Compared with the results yielded by this gravimetric process, those obtained by Bernard present the greatest discordancy. The figures he gives are invariably too high, and there is no intelligible relation in the differences noticeable, suggesting that there is something radically wrong in taking decolouration without precipitation of suboxide as a means of estimating the amount of sugar. Dr. Pavy supports this assertion by the conclusions derived from a large number of experiments.

NAMES OF BRITISH MEDICINAL PLANTS.

By W. G. PIPER.

Coquelicot.—4. *Derivative of Coccus.*

EARLY in the sixteenth century the *Coccus ilicis* held its place, without a rival, as the most brilliant and permanent dye known. The influence of the Arabs had widely extended its use, and had substituted for *Coccus* the Arabic name *Kermes*. In the Spaniards, their former slaves, Arabian enterprise seemed to be revived, and by the discovery of America the commerce in *Kermes* received a blow from which it has never recovered. When the Spaniards first entered the New World, in 1518, they found that the inhabitants possessed a dye of even a more splendid hue than their own scarlet. This was found to be produced by a small insect now called *Cochineal*. Five years afterwards, in 1523, Cortez received orders to pay special attention to this substance, and about the same time specimens were received in Spain. There they received their first European name, *Cochinilla*. We have now to consider its origin.

In the first place we note that it is a diminutive. It is perhaps a trait of the Spanish character that so many things from the New World were called "little," however much they may have surpassed Old World products in value. *Sarsaparilla* and *Vanilla* are examples which will immediately occur to pharmacists. *Sarsa-parilla* means "little prickly vine," *Vanilla* means "little pod," and *Cochinilla* means "little cocchi." Many think that the meaning of the word *Cocchi* bears here is that of a berry, so that *Cochinilla* would mean a little berry. Against this we must put the fact that the earliest Spanish writers described the *Cochineal* as an insect, and it was only in after years, and in other parts of Europe, that the idea arose of its being a berry. We think that the more probable meaning of the word is what first occurs to us, the *Scarlet Grain* or *Coccus*.

Remembering what ages have elapsed since the *Coccus* was first discovered, remembering the picturesqueness of its name—the scarlet thing—remembering the strange history of its gradual spread over Europe, and the reverence with which it was regarded as a royal colour, the pharmacist should certainly regard its modern supplanter and representative with great interest.

But not only is the meaning and history of the name interesting, but the way in which it spread over Europe, and the similarity of the European names, are both worth notice.

We are told that in 1589 the drug was regularly procured from Spain by the Antwerp merchants. This was probably the means of its introduction to the rest of Europe. The Dutch name is *Cochenille*,* evidently imported with the drug. The other North European names show traces of their descent from this. The German is *Koschenille*, the Danish is *Cuzzinell*, the Swedish is *Konsienell*, and the Russian is *Koossenel*. The Portuguese, Italian, and French probably got their names direct from Spain. The Portuguese is *Cochenilha*; the Italian, *Cocciniglia* and *Cocinilla*; and the French, *Cochinille*. We get our *Cochineal* from the French, but the word passed through many phases of spelling before it settled in its present form. The oldest and most original mode of spelling is that in Johnson's "*Gerarde's Herbal*," published in 1633, where it is spelt *cutchonele*. In various other books we find it spelt *cocheneel*, *cochenille*, *cochinille*, and *cocbinello*.

* The *j* here has the sound of the English *y*, or more nearly resembling *y* than *j*.

ON THE EARLY HISTORY OF "MESMERISM."

By W. B. A. SCOTT, M.D.

ALTHOUGH what is somewhat absurdly termed "mesmerism," in some form or other, seems to have been dimly recognised among all nations from the remotest antiquity, and may, perhaps, have furnished the elements of truth which helped to gain credence for many of the pretended miracles of professed sorcerers and enchanters, still, the system of doctrines drawn up by Mesmer himself seems distinctly traceable to the introduction of the magnet into medical practice. Of this Paracelsus affords us the earliest well-known instance, in modern times at least; or, perhaps, it would be more correct to say that he was among the first of the moderns to endeavour to give a *rationale* of the magnet's therapeutical action. This he furnished on astrological principles, and in his usual mystical language, asserting that all diseases which arise from the influence of the planet Mars, such as hemorrhages and the like, which proceed from the centre of the body towards the periphery, can best be cured by the application of the magnet, which, he said, "kept them in the centre." He distinguished between the action of the two magnetic poles, calling the north the helly, and the south the hack, of the magnet. In hysteria the magnet was to be applied with the north pole pointing to the patient's feet, and the reverse in epilepsy.

The perception of the therapeutical action of electricity in the eighteenth century recalled the attention of physicians and others to the real or supposed medicinal virtues of the magnet. Klärlich of Göttingen recorded 130 cases in which he had cured toothache by this means. His results were confirmed by Hollmann and Kästner, who further remarked that itching, pain, and increased perspiration followed the application of the magnet. It was found that the application of the north pole diminished pain in inflammation of the eyes, in which disease, and even in aural affections, the magnet was found to be of service. The celebrated De la Condamine lent his high authority to the assertion that the pain arising from carious teeth might be allayed by magnetism.

Several explanations were offered of these phenomena. Some maintained that they were due to the obvious physical properties of the magnet, regarded merely as a heavy and cold substance, or to the pressure and friction caused by the mode in which it was applied. Others fancied they might be explained by the properties possessed by the magnet simply as a piece of steel—its ferruginous quality. A third set attributed them to the characteristic action of the magnet on iron. But the inadequacy of such explanations was sufficiently demonstrated by Weher, Glauherecht, Reichel, Andry, and Thouret.

In 1774 Anton Mesmer appeared on the scene. As the record of his life will for my present purpose be sufficiently furnished by the account of the fate of his theories, it may suffice here to state that he was born in 1734, and died in 1815, and was, at the date under consideration, a physician at Vienna.

The attention of Mesmer having been called to the "magnetic cures" in 1774, he came to regard the curative agent as an animal (or rather universal) magnetism, quite distinct from that of the magnet, and capable of being called into activity by the mere force of the will. (Notwithstanding this, he himself frequently employed the magnet, at least as late as 1776, and it was by this means that he effected the cure of the girl Oesterlin, in 1774, of convulsions, which cure seems to have been acknowledged by Ingenhousz, afterwards one of Mesmer's bitterest opponents.) This animal or universal magnetism he held to pervade all nature, and to be the bond by which all things are held together: its "fluid" is identical with that of electricity. In human beings, he adds, very inconsistently, the susceptibility to its influence appears and disappears with disease, being absent during health; and he feels it necessary to insist on an ebb and flow of this fluid comparable to the tides of the ocean. It was often objected to him that his theory was nearly, if not quite, identical with that of Robert Fludd, Konelm Digby, and Valentine Guatrakes; but its want of novelty was its smallest objection. It was, perhaps, rather the fault of his age and country than his own that Mesmer, both at this time and subsequently, devoted so much time to spinning mystical theories and inventing imaginary explanations of the *modus operandi* of his method of treatment—a method the value of which, in suitable cases, is now admitted by the highest medical authorities, but the *rationale* of which is likely long to remain a mystery. The

fruits of this error soon became apparent, for Mesmer, having sent an account of his doctrines to the principal academies, had the mortification of being wholly unnoticed, except by that of Berlin, which sent him a not very flattering reply, justly remarking that his limitation of the activity of his supposed "fluid" to the sick alone threw much doubt on his entire theory. In the same year, in a tour through part of Austria and Bavaria (during which he abandoned the use of the magnet, restricting himself to merely touching the patient with his finger, or even only pointing at him), he cured Professor Bauer, of Vienna, of inflammation of the eyes, and the director of the Bavarian Academy of Sciences of paralysis. In 1776 occurred the celebrated case of the girl Paradies, at Vienna, whom he alleged that he had cured of amaurosis, though this was denied by his opponents. According to his own account (which he confirms by the testimony of the girl's parents), she was brought to him on January 20, completely blind, and suffering from convulsive movements of the muscles of the eye, and on February 9 her eyesight was completely restored. His opponents, he adds, prevailed on the girl's parents to retract their testimony as to the reality of this cure, by representing to them that it would deprive them of a small annuity which was paid to their daughter in consequence of her blindness. He then asserts that, actuated by this fear, the parents themselves deprived their daughter of her newly-recovered sight. Disgusted with this ingratitude, he tells us, he left Vienna; but so far was his departure from being compulsory, or attended with any disgrace, that one of the Austrian Ministry gave him a letter of recommendation to their Ambassador at Paris. His opponents asserted that, as the alleged cure naturally caused much sensation, the Empress caused the girl to be examined before a commission, who, finding that Paradies could tell the colour of objects presented to her only while Mesmer remained in the apartment, denounced the whole affair as an imposture, and Mesmer was accordingly ordered to quit Vienna within twenty-four hours. It is perhaps impossible at this distance of time to ascertain the rights of the case. Kurt Sprengel says, "It must be admitted that, even if Mesmer's account is not true, he has presented it in a very probable or truth-like manner." I may remark, for the credit of our common humanity, that the charge against the girl's parents of wilfully putting out their child's eyes for the sake of a paltry annuity seems in the highest degree improbable. Even had they been depraved enough to be willing to do so, it is difficult to see how they could have effected their wicked purpose by any means which would not have left tell-tale marks of violence.

Coming to Paris in 1778, Mesmer at first engaged but little in practice, and even declined a proposal on the part of the Faculty of that city that a commission should be appointed to decide authoritatively on the claims of his system, although he invited individuals to be present in their private capacity at his operations. He alleged, not without some reason, that if commissioners were appointed, with leave to examine and interrogate his patients, the excitement thus produced would be likely to exert a most unfavourable influence on these latter. In September of this year he made a convert of Charles d'Eslon, a member of the Parisian Faculty, and physician to the Comte d'Artois. Encouraged by this, he published a work professing, among other matters, to give the "essentials" of his system. The reader shall now have an opportunity of judging for himself how far these "essentials" were likely to recommend his theories to the acceptance of any reasonable man (be it, however, always remembered, that the reality of "mesmeric" cures is no more affected by the truth or falsity of Mesmer's doctrines than the value of homœopathic medication is affected by the truth or falsity of Hahnemann's theory of "dynamization"):

"The celestial bodies, the earth, and animated organisms exert a reciprocal influence on one another. The medium of this influence is the universal fluid (Newton's ether) which penetrates and surrounds all things. This influence works by mechanical, but hitherto unknown, laws. Then arise reciprocal operations, comparable to the ebb and flow of the sea. On this reciprocal influence depends the properties of matter and of organised bodies. It operates directly on the nerves, causing, in the human body, phenomena similar to those of the magnet. In the body are different and opposite poles. Animal magnetism is that property of the animal body by which it becomes susceptible of this reciprocal influence; this animal magnetism flows with inconceivable rapidity from the body into other animate and inanimate bodies, and may operate at considerable distances, without the intervention of any connecting medium.

It is capable of being reflected, like the rays of light; it is strengthened, depressed, and imparted by means of sound. There are some animated bodies with a property so opposed to animal magnetism as to destroy the operations of the latter; this opposite property, like animal magnetism, is a positive force, pervades all bodies, and can be accumulated and distributed. Animal magnetism is entirely distinct from ordinary magnetism, for a magnet may be impregnated with the former without its action on iron being in any way affected. By means of animal magnetism all nervous diseases may be cured directly, and all others indirectly; it explains the action of medicines and brings on crises. By its means the physician learns to understand the most complicated diseases, and medicine is brought to its highest pitch of perfection." We cannot wonder to learn from Kurt Sprengel that "this system found no favour, either in Paris or anywhere else." A great, though as yet imperfectly apprehended, truth unquestionably underlies so-called "mesmerism;" but for this, such a flow of verbiage as the above must have effectually choked the system in its infancy. Another deliverance of Mesmer, very much more deserving of quotation, is to the following effect:—"When the action of Nature is regular, the body is sound; when obstacles lie in the way of this regular action, Nature strives to overcome them; hence ensue crises, which are wholesome or injurious according as the result is favourable or unfavourable. To each of these accidents [*i.e.* crises] physicians have appropriated a special name, and each has been described as a separate disease. The symptoms are innumerable, but the cause is one and the same; all medicines which cure, how different soever, operate in the same way, *i.e.* by favouring a crisis, and this is the only mode of healing. The great advantage of animal magnetism consists in its hastening a crisis without incurring danger." He thus illustrated his meaning:—"In order to cure epilepsy, we must cause the occurrence of fits." The most striking feature of this paragraph is that the whole passage as it stands might have been adopted with equal propriety by an "orthodox" physician of 2,000 years ago in support of his own practice, or by a homeopathist of the present day in support of the doctrine of similars. For, in the first case, the essence of the Hippocratic practice consisted in the favouring of the crises, and even the assertion that "the cause of all diseases is one and the same" was not heretical, since the "Pneumatics," a perfectly orthodox school, to which some suppose Aretæus to have belonged, referred to the *pneuma* as the source of every malady. In the second case, however, the modern homeopathist might object that by the word "crisis" in the above passage, Mesmer expressly states that he means the totality of the disease, and not merely the "critical evacuations" to which the Hippocratists chiefly referred when they ordered their treatment to be directed to the favouring of crises. Now, treatment by means of drugs capable of producing the totality of the disease, or something very like it, is just the dictate of the law of similars. The unity of cause of all diseases might be referred to Hahnemann's doctrine of their purely dynamic origin.

Enough has now been said about the theories whereby Mesmer sought to explain the phenomena since so intimately associated with his name, and there remains to tell the fate which befell himself and his accomplished, and at first devoted, follower d'Eslon. The latter, who, as we have seen, was a member of the Parisian Medical Faculty, had by this time published a work in defence of his master's views, so his brethren of the Faculty, by way of affording a satisfactory confutation of his heresies, deprived him for one year of the right to vote in their body, and further directed that if, at the expiry of that period he still declined to recant his opinions, his name should be struck off the roll of members. Mesmer had proposed that a certain number of patients should be taken, whereof one half should be treated by the Faculty and the other half by himself, and the results compared; but the orthodox party, with their usual prudence, refused to have anything to do with so hazardous a test.

At first Mesmer and d'Eslon sought by means of Court influence to have impartial witnesses appointed to report upon their mode of treatment; but, although the request was granted, Mesmer was not satisfied with the nominees. Expressing his intention of leaving France, the Queen invited him to remain, offering him a salary of 40,000 livres if he would impart his system to three physicians appointed by the Government. This proposal also Mesmer rejected, but his rejection was so strongly disapproved of by d'Eslon that the latter broke off all

connection with his old master, and set up for himself. Mesmer now departed for Spa, where he resided some time; but a society, entitled "The Order of Harmony," numbering upwards of 50 members, four of whom were physicians, having been founded in Paris by the friends of Mesmer, each of whom engaged to pay 100 louis annually for his instructions, he was persuaded to return, and established himself as the rival of d'Eslon. All members of the new "Order" pledged themselves to strict secrecy.

The mode of treatment seems now to have been as follows:—A large tub, provided with a cover, furnished with iron rods to act as conductors, was half filled with acidulated water. A ring was attached to these rods, which was fastened to any part of the patient's body. Round this tub the patients sat in a circle, their feet on a straw mat. They sometimes formed a chain, the thumb of one patient being placed in contact with the forefinger of his neighbour. Occasionally music was performed during the operation. The practice of Mesmer attracted the more favourable notice on account of the alleged cure of Count de Gebelin, royal censor, and perpetual president of the museum at Paris, who wrote in the highest terms of the new system, and even spoke of Mesmer as a genuine miracle-worker. De Gebelin unfortunately died during treatment, but Mesmer represented this event in such a way as not to be prejudicial to himself.

In 1784 two commissions were nominated by royal authority to inquire into the subject of animal magnetism and its alleged cures, the one consisting of members of the medical society, the other of members of the Academy of Sciences and medical faculty. Lavoisier, Guillotin, Franklin, and Jussieu, among others, were members. Mesmer positively refusing to admit the commissioners in any other capacity than that of mere spectators, they naturally had recourse to d'Eslon, whom Mesmer had not as yet disclaimed (although in the sequel he protested against any conclusions drawn from d'Eslon's mode of procedure), and who invited the investigation which Mesmer declined.

Jussieu distributed the observed phenomena into four classes—(a) those of which the cause could not be given with certainty, (b) those which were unfavourable to the doctrines of animal magnetism, (c) those which might be ascribed to imagination, (d) those which lead us to suspect the operation of some other agent. He mentioned under the head of the latter cases where blind persons had been sensibly affected by the approach of magnetised rods, and concludes that a fluid of some kind, comparable to electricity and the vital principle, and to the influence of which morbidly nervous persons are peculiarly susceptible, is transmissible from one body to another. The other commissioners, however, reported much more unfavourably on the subject, ascribing the alleged phenomena to be due to pure imagination. Bonnefoi, a surgeon at Lyons (1790), however, in what Sprengel terms "an accurate and profound analysis of the report," exposed a good many contradictions and errors on the part of the commissioners. Probably Jussieu's report came nearest the truth; but, so far were the medical faculty from inclining to moderate measures, that they summoned before them 21 of their members who had received d'Eslon's instructions, and ordered them, under pain of degradation, to abjure his doctrines. This 17 did, for the sake of peace, but one of those bitterly complained of this characteristic instance of professional bigotry.

In 1784 the doctrines of Mesmer received a considerable impulse by the labours of Puiséguir, who first called attention to the phenomena of clairvoyance as an important part of the treatment. He seems to have rejected entirely Mesmer's "tub" apparatus, and conducted his treatment for the most part in the open air. This method was introduced into Germany by the celebrated Lavater in 1787.

The "metallic tractors" of Perkins attracted much attention in England and Denmark about the year 1798. But Dr. Haygarth having shown that frequently identical effects could be obtained by means of wooden tractors painted in imitation of metallic ones, the cures of Perkins were unhesitatingly set down to the imagination. This circumstance, in all probability, did much to retard the progress of "mesmerism" in England, where it has only of late years met with anything approaching to general professional recognition, while in Germany and Holland it early found numerous followers. Had the disciples of Mesmer, on the one hand, refrained from so often copying their master's verbiage in their endeavours to explain undetermined phenomena, and contented themselves with the accurate observation of their phenomena, and had "orthodox"

physicians, on the other hand, adopted the moderate language of Jussieu, instead of imitating the intolerance of his colleagues, we should now be in a better position for determining the extent to which "animal magnetism" is capable of useful application to medical practice.



AND

Literary Notes.

Chemical Composition of Foods, Waters, Soils, Minerals, Manures, and Miscellaneous Substances. Compiled by E. T. Kensington, F.C.S. London: Churchill. 1877.

"THE object of compiling this manual is to furnish the public with a ready means of ascertaining the chemical composition of the various foods, waters, minerals, &c." Flannel shirts furnish a means of keeping one's self warm, but the natives of Timbuctoo do not use them much. If the public want to know the chemical composition of gooseberries, of stilbite, of indigo, seed cake, or of many hundreds of other substances, they will find them all given here. If the public understand the analyses when they do get them we shall promptly expect the millennium. The book would have been more useful to scientific people if authorities and references had been given with each analysis. We have no fault to find with the arrangement, the matter, or the typographical execution of the book. We have only noticed one error. *Anthyllis vulneraria*, on p. 146, is put *anthyllis vulnerasia*. This is essentially a work of reference, and may occasionally be useful in that way.

The Influence of Climate in the Prevention and Treatment of Pulmonary Consumption. Lettsomian Lectures for 1876. By Charles Theodore Williams, M.A., M.D. Oxon, &c. London: Smith, Elder & Co. Pp. 151.

A REPRINT of lectures delivered in January, 1876. The author points out that in spite of the great and continuing increase in our knowledge of meteorology and indigenous diseases, we know but little of the effect of variations of climate and weather upon actual patients. Little has been done also to trace to its ultimate cause any improvement which may have taken place in patients. After thus stating the want, the author goes on to discuss the various theories of prevention and exemption (from consumption), giving some remarkable cases which have been recorded. He then gives us the results of his own observations on a large number of patients, and states his opinions as to the relative suitability of various places for consumptive people. As these opinions depend on the value assigned to evidence given, they are not to be considered binding upon anyone. Each one must take the evidence, and after duly weighing it, must decide for himself. Such being the case, we refer all who want information on these points to the book itself.

The Chemist's Manual: a Practical Treatise on Chemistry, Qualitative and Quantitative Analysis, Stoichiometry, Blowpipe Analysis, Mineralogy, Assaying, Toxicology, &c. By Henry A. Mott, jun., E.M., Ph.D., &c. New York: Van Nostrand. London: Trübner & Co. Pp. 625.

"ON the principle that every scientific man 'should compile his own pocket book as he proceeds in study and practice, to suit his own particular business,' the author accumulated from time to time a large number of valuable notes and tables. . . ." And in direct violation of this principle, he has, largely increased, and at the solicitation of his friends published, these same notes which make up the valuable book before us. It is rather droll that the author should state his principle in the very forefront of his book, and before he gets to the end of his preface should say, in effect, "Now I do not want you to practise this. I have prepared a very useful manual for you: please give me so many shillings for it." We think many will be inclined to take his later advice.

He also says, towards the end of the preface, that "The various subjects considered open a channel for it among chemists, pharmacutists, and scientific men in general." And so it is.

We hardly know how to describe the work. It might be

labelled "Enquire within for everything." We have tables of the elements regarded from two points of view; a table of specific heats. Under qualitative analysis we have the ordinary table; Zetnow's scheme, which does away with H_2S and its attendants (stink, &c.); a scheme for the alkaloids, and a new reaction for them; reactions and a scheme for analysis of fat oils; useful tables for blowpipe analysis, and many others. In one of the specific gravity tables, we see that the author gives the average weight of a cubic foot of a great many things. Then come more than a hundred pages of mineralogy. Next are some useful tables for stoichiometry, or chemical calculations: one, "showing the amount of constituent sought for one part of the compound found," is specially good. Then we find a hundred pages of quantitative analysis, thirty pages of assaying, twenty-four pages of "analysis of a man and his secretions." Then comes the "miscellaneous department," including Mendelejeff's classification of the elements, which has recently led to the discovery of a new one; a curious table of "defunct elements." We were not aware that there were so many. There are references here to the literature of 41 elements which have been proved not to exist, commencing with Edelerde, announced in 1777. Next we have the price of metals; ash of agricultural plants and products, their composition; and detailed analysis of bread grains and potatoes. Then comes Fresenius' table of the composition of fruits. But we must skip many useful tables, and mention only poisons and their antidotes, weights and measures of all sorts, sizes, and prices. The book closes with a table showing the difference of time at noon at New York and other cities, a table of the value of standard coins in circulation in U. S. money, and a good index.

The type throughout is excellent, and the chemical formulæ with which the book is strewn are marvellously clear.

Every chemist who aspires to take his proper place of scientific referee for his district will find this book a capital and unobtrusive servant. We cannot describe the book any better than by the list of contents given above. It is a regular *omnium gatherum*, and everything in it is useful or curious.

The British Flora Medica: a History of the Medicinal Plants of Great Britain. By B. H. Barton, F.L.S., and T. Castle, M.D., F.L.S. New edition, revised, condensed, and partially rewritten by John R. Jackson, A.L.S., Curator of the Museums of Economic Botany, Royal Gardens, Kew. Illustrated by a coloured figure of each plant. London: Chatto & Windus. Pp. 447. 30s.

Dr. Todd tells us somewhere in his "Students' Guide" that in selecting a book or in passing our judgment upon it we should consider first, "What is the author's purpose?" Secondly, "Is it a worthy one?" Thirdly, "How has he carried it out?"

From the present author's preface we learn that he wished to suit the book to ordinary as well as medical readers, and to give in a condensed form what ancient writers thought about plants, "not as of any practical use, but as a memorial of past ages."

"Is this object a worthy one?" We think so. Victor Hugo said in the French Senate the other day that "To remember is to foresee." By studying the past opinions of men we learn to discern in what direction those opinions are travelling. We cannot tell exactly what form they will take, or what fields they will traverse, but we can learn their general direction and in a degree prepare ourselves for their reception. And the study of the course of opinions is admitted to be one of the most elevating and instructive objects of human research. The author's object is therefore a worthy one.

Considering next the way in which it has been carried out, we must remember that he has been hampered by two things. The book had to be written to suit the plates, which were originally prepared for a work professing to give a description and figure of every medicinal plant growing in Britain. These plates have compelled the insertion of many plants not British, as mulberry, fenugreek, and stavesacre. They have also compelled a most curious arrangement, or disarrangement. The plates are arranged according to the alphabetical position of their English names. The text has consequently to be arranged similarly; but instead of boldly avowing this, the Latin name is placed at the head of each section, and the English name follows in comparatively small type.

The existence of the previous work was also a great impediment. It has resulted in the retention of botanical descriptions of all the plants mentioned, which are quite out of place in the present work, however appropriate they may have been in the

original. It is quite a work of supererogation to insert them; it increases the bulk of the work without any corresponding increase of its value. The scientific name, with the authority, as *Ulmus campestris* (Smith), is all-sufficient for the botanist to identify the plant without possibility of error, and the addition of a long description will not help those who do not understand it.

The descriptions are, however, much shorter than in the original work. We find also that Mr. Jackson has omitted all the foreign synonyms except the French and German. We think this is a pity, for although they are of little use to ordinary readers, they add much to the value of the book for the student, and take up but little space.

Still, in spite of these awkwardnesses the author has produced a most valuable and readable book. There are many facts contained in it for which we have sought in vain in ordinary works of reference. The whole is written pleasantly, and the variety of fact and incident is so great that we read on without noticing the progress we are making.

The geographical distribution is treated too scantily to show the ordinary reader the beauty and wonders it contains, but perhaps in a work of this kind it is impossible to do justice to it.

The author has not laboured to make the etymology complete, but has chosen the most prominent and easiest facts, and although we do not always agree with the derivations given, they are all supported by good authorities, and are sufficiently detailed to be generally interesting.

It is in the properties and uses that we find the richest stores of information, but it is impossible to do justice to the author without a much longer extract than we can afford space for.

The plates, although in most cases suffering from the universal fault of too gaudy colouring, are in some cases very characteristic. We would specially mention the engraving of the flower of the benbane, which gives a remarkably good idea of its appearance. All the plates are so well engraved that the defect in the colouring is only a minor one. We notice that on the plate facing p. 60 a figure of the white bryony is labelled black bryony. We have found but one typographical error. On p. 171 *Aroideæ* is spelt *Ariodeæ*. The book is tastefully though not very strongly bound.

Although we think the author has not accomplished his object so well as he might have done, yet he has collected so much and such interesting information that we intend to keep the book always at hand for easy reference. It is a good book in spite of itself.

An Essay on New South Wales, the Mother Colony of the Australias. By G. H. Reid. Sydney: Thomas Richards. London: Trübner.

This is an elaborate and exhaustive account of the colony, written with the desire of making her vast resources known and of calling the attention of men of brains and energy to this splendid field for their industry. Every point of interest seems to be touched on and described with all necessary fulness, and we rise from a perusal of it convinced of the great future of the colony whose interests it is designed to advance.

Text-book of Structural and Physiological Botany. By Otto A. Thorne. Translated and edited by A. W. Bennett, M.A., B.Sc., F.L.S. Illustrated with about 600 wood-cuts and a coloured map. London: Longmans, Green & Co. Pp. 479. 6s.

THIS book supplies a want which we have long felt. In the compass of about 450 small pages it gives a clear account, unencumbered by detail of only systematic or technical interest, of the modern discoveries in botanical science, and serves as an introduction to Sach's magnificent "Text-book of Botany." Until this appeared there was no book in circulation in English which gave the numerous and important discoveries and rearrangements of facts made known during the last few years. The best and most recent text-books have contented themselves with clipping away all that had been proved to be false, while everything was carefully retained that had the least authority in its support. The publication in English of Sach's text-book destroyed this state of things, but the size and price of that magnificent work excluded many from its advantages. The book before us, however, gives in a smaller compass all the important facts contained in the larger. Still it is by no means a mere digest or *résumé*. It is an entirely independent and original work, and we heartily recommend it to students of this important and interesting science. The illustrations are

excellent. Those depicting microscopic objects show internal evidence that they are not diagrams drawn from memory, but are actual sketches from clear slides. The map of geographical botany adds to the value and beauty of the book. The following is the arrangement of the matter:—

Historical introduction. The cell as an individual. The cell as a member of a group of similar cells. The construction of the plant out of cells. The external form of plants. The life of the plant, special morphology, and classification. The changes which have taken place in the vegetation of the globe in the course of geological periods. Botanical geography. Glossarial index.

In the face of the very general misconception of the means proper to be used in the study of botany we cannot let this review go forth without adding that no book will ever teach botany. Let the student study plants with a book to help him, and he will become a botanist. If he study books with no occasional plant to help him we cannot say what he will become. There is no word in English proper to describe him.

RASPAIL'S *Manuel de la Santé*, a compact volume of 450 pp. 8vo. has appeared for the thirty-first time, in its annual edition, and its reputation among the middle and lower classes in France, increasingly manifest year by year, since its first issue in 1845, quite warrants us in devoting some space to the work. The elaborate title reads thus—"Yearly Manual of Health for 1877; or, Domestic Medicine and Pharmacy, containing Theoretical and Practical Instructions, necessary to Prepare and Use the Remedies which will Prevent as well as Cure, Quickly and Cheaply, the Principal Curable Diseases, or to Procure a Partial Benefit almost Equivalent to a Cure in Chronic and Incurable Maladies." By F. V. Raspail. Paris: 14 Rue du Temple. 1877.

The motto of our venerable author, as it appears on the title-page, is "Comment pourrais-je me dire docteur quand tout le monde va devenir sans beaucoup de peine aussi docte que moi." Modest, certainly, but hardly justified, we must say, by the doctoral tone of the pages of his manual. Some sentences of our author's preface are worth alluding to. We learn that the illustrious Radical now counts 83 years of existence, and that the past twelve months have been afflicted by the loss of the "guardian angel" of his old age, Mdlle. Marie Raspail, whose funeral, in Paris, a few months since was the occasion of an immense and sympathetic demonstration. During the many years of our author's exile, and when in prison on numerous occasions, the watchful care of this devoted daughter, he writes, aided him to support the moments of *ennui* and sadness inevitably attendant upon such episodes. The author states, in his preface, that the object of the manual is to enable the reader to dispense with the services of a physician or pharmacien in ordinary cases of sickness; and farther on he adds that from his indications it will be perfectly easy for anyone to compound his own remedies—in point of fact, no more difficult than to do good cooking by the aid of a cookery book—a not very encouraging simile, by the way. At the end of the work is a price current of drugs, chemicals, and pharmaceutical preparations, to which are added the special productions of the Raspail firm, conducted by his sons, and readers are further advised that the author replies to no letters for medical advice, and if any more is desired than is contained in the pages of the manual they can address his son, who follows the medical profession. These observations quite justify us in characterising the publication as an immense *réclame*, which we have no doubt has proved a powerful lever in building up the fortunes of the Raspail family. The work having, however, occupied a position as a popular authority, and being current merchandise in every French book store, we feel quite justified in adverting to it a little more at length. The sententious style of our author's opening to the first chapter attracts our attention, entitled by him "*Prolégomènes*," or preliminary observations. We quote:—

"I. Hygiène is the art of preserving the health; medicine is the art of re-establishing the health when it is destroyed or impaired.

"Health is the normal state of man. To be in perfect health is to live; sickness is an exceptional state of life. To be sick is to be on the road to death.

"Health enables man to fulfil towards society his natural duties; sickness reduces him to a useless rôle, and he becomes a burden on society.

"II. [And here comes a fine phrase, one of many which our author perpetrates in the course of his work] Respect for the invalid, if his sickness has arrived in the service of humanity, his country, or his family. It is then one of those glorious wounds which every hand should be ready and willing to pour a balm and blessing upon."

After a sufficiently violent diatribe against the medical profession and their "unintelligible jargon," M. Raspail enters upon the practical part of his work. Diseases and remedies are alphabetically and analytically treated, with a diffuseness which must prove at times almost too much for the generality of his readers, who, as we have already intimated, are of the humbler ranks of society.

Our author has been for years jestingly called the "Apostle of Camphor," and, in point of fact, this product enters with a remarkable frequency into the hundreds of formulæ due to his fertile and innovating brain. He does not disdain, however, the employment of any of the recognised medicinal products common to the regular profession: his "second favourite" would seem to be aloes.

The formulæ are not original enough to be worthy of more extended quotation. The work and its author are most noticeable as curious illustrations of the combination in the French character of an ardent devotion to money making with a certain reckless disregard of all caution, qualities which seem to Anglo-Saxons quite incompatible.

A NEW fortnightly journal entitled *Trade Marks* has been commenced, and it promises to be of considerable commercial value. A special feature is a collection of reports of decisions concerning trade marks. The journal is evidently in the hands of men who understand the subject.

This month is published in Germany the first number of a journal intended to collect all the papers on physiological chemistry that are published. Prof. Hoppe-Seyler, of Strasburg, and other German chemists, are the editors, and it is styled *Zeitschrift für Physiologische Chemie*.

IN THE Proceedings of the Royal Society, Nos. 174 and 177, for 1876 and 1877, will be found papers by Mr. A. M. Worthington, "On Drops." It is almost surprising to consider how little is really known about drops. Pharmacists, of all people, should know most, but how many get beyond the fallacy that sixty drops equal sixty minims, or thereabouts, and make one dram. The two papers referred to record the results of experiments for the purpose of determining the change in form which drops undergo during their fall. These experiments have been conducted by means of the electric spark. This spark lasts about $\frac{1}{2400}$ th of a second, and objects seen by it, even when they are in rapid motion, seem fixed. If the spark is bright enough the image of the object is retained on the retina long enough for the attention to be fixed on it, and after a little practice it is possible to draw from memory the object seen. The result of Mr. Worthington's observations can only be explained by figures, and this note is only for the purpose of drawing attention to them.

THE London Homœopathic Publishing Company has lately published "The Signs and Concomitant Derangements of Pregnancy: their Pathology and Treatment, to which is added a Chapter on Delivery, the Selection of a Nurse, and the Management of the Lying-in Chamber," by William Morgan, M.D., to whose name is added an inverted pyramid of distinctions ten lines long, culminating in two etceteras. The book is dedicated in high-flown language to the mothers of England. It is associated with homœopathic medication, a generally excellent system, we should say, for pregnant women and newborn babies.

NEW BOOKS

PUBLISHED SINCE JUNE 15.

- Clinical Lectures on the Curability of Tubercular Peritonitis and Acute Phthisis (Galloping Consumption). By — McAnderson. Post 8vo., pp. 56. London: Macmillan; Glasgow: Macdolese. 2/6
- The Retrospect of Medicine. By W. & J. Braithwaite. Vol. 75. 12mo., pp. 430. Simpkin. 6/6

- Infectious and Contagious Cattle Diseases. By A. Bruce. 12mo., pp. 94. London: Simpkin; Aberdeen: Adam. 1/6
- On the Science of Weighing and Measuring, and Standards of Measure and Weight. By H. W. Chisholm. Nature Series. 12mo., pp. 204. Macmillan. 4/6
- Lispings in Latin: an Elementary Book, containing Simple Rules, Short Vocabularies, Copious Exercises for the use of very Young Learners. By R. M. Frankland. 12mo., pp. 48. London: Simpkin; Bradford: Brear. 1/
- Globe Encyclopedia of Universal Information. Vol. 3. Royal 8vo., pp. 600. London: Simpkin; Edinburgh: Jack. 12/6
- Cottage Gardening; or, Flowers, Fruits, and Vegetables for Small Gardens. By E. Hobday. Post 8vo., pp. 130. Macmillan. 1/6
- Chemical Composition of Foods, Waters, Soils, Minerals, Manures, and Miscellaneous Substances. By E. T. Kensington. 12mo., pp. 316. Churchill. 5/
- A Practical Treatise on the Manufacture and Distribution of Coal Gas. With numerous Plates and Illustrations. By W. Richards. 4to., pp. 380. Spon. 28/
- Compendium of Mercantile Law. By J. W. Smith and G. Morley Dowdeswell. 9th edition. Royal 8vo., pp. 1,092. Stevens & Son. 38/
- Elementary Botany for Elementary Classes. By W. A. Snaith and Wm. Field. 12mo., pp. 112. London: Simpkin; Manchester: Heywood. 1/
- British Rainfall, 1876. On the Distribution of Rain over the British Isles during the Year 1876. By G. J. Symons. 8vo., pp. 220. Stanford. 5/
- Textile Colourist: a Monthly Journal of Bleaching, Printing, Dyeing, &c. Edited by Charles O'Neill. Vol. 3. 8vo., pp. 178. London: Simpkin; Manchester: Palmer. 21/

MEDICAL GLEANINGS.

A French physician has recommended the use of powdered potassium bromide as a caustic for destroying malignant and other growths. He has had good results in treating ulcers on the legs and growths on the face.

* *

A handsome testimonial has lately been presented to Dr. Hassall in recognition of his valuable services as the originator and founder of the Royal National Hospital for Consumption and Diseases of the Chest, at Ventnor. It consists of a service of plate and 300 guineas.

* *

The *Louisville Medical News* says the value of blue glass as a histological force was nowhere better shown than in the case of the man who attempted to cure a wart on his nose by its use. In two weeks' time he was unable to tell which was the nose and which was the wart.

* *

The uses of toughened glass are not yet exhausted. At the suggestion of Dr. Wiltshire, Messrs. Maw, Son & Thompson are now making a vaginal speculum of toughened glass, coated outside with a vulcanite solution. This is not nearly so liable to breakage as the old form of glass speculum, which it will doubtless replace.

* *

Not long ago a man committed suicide in America to avoid paying his doctor's bill. And he left word to say so. Our readers will remember that last month we published a notice of the suicide of Mr. John Middleton while in an unsound state of mind, caused, among other things, by the prosecutions by the Medical Defence Association. The *Students' Journal* fears that all subsequent suicides by chemists will be laid at the doors of the same association.

* *

A country doctor in Germany writes that he always carries with him on his rounds, "lots of powdered gum arabic for all wounds not healing by first intention, or where there is loss of substance, or for deep burns, ulcers," &c. The whole affected surface is covered with the dry powder, a compress saturated with water, then a dry compress, and then a bandage applied. It is soothing and absorbs all secretions, forming a bland, mucilaginous mass, which comes off easily, without adhering. He claims that it is a preventative of septicæmia.

Professor Hebra points out that it is quite immaterial as to whether a water bandage is cold or hot. Between 10° and 105° the temperature makes little or no difference. Therefore, never torture yourself with a cold bandage when a warm one will do as well.

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We are sorry to find that we libelled the deputation of medical gentlemen who waited upon the Home Secretary last month. We thought that there might be at least one eminent man among them, but the *Students' Journal* very courteously informs us that we are mistaken. There was not one eminent man among them.

**

Here are a couple of new remedies for those who are always eager for something novel. The editor of the *Medical and Surgical Reporter*, U.S., says that he once saw cockroach tea administered to a volunteer by his fellows for the cure of tetanus. He found that its use was not uncommon.

Just as an American doctor was making mental note of a very successful mode of treatment of croup, which he thought he had discovered, he found to his disgust that the said treatment had been abandoned, and that the child's parents had been giving him teaspoonful doses of kerosene every four hours. But it was the only case of recovery from croup that that doctor knew of that winter.

**

Dr. Bayes writes thus in the homœopathic journals:—"In the year 1825, Dr. Gram (a Danish physician) landed in New York, and introduced the practice of homœopathy into the United States. In 1877, fifty-two years later, nearly 5,000 physicians are practising the system in that country. In the year 1827, Dr. Quin came to London in the suite of Prince Leopold of Saxe-Coburg, and introduced the practice of homœopathy into Great Britain. In 1877, fifty years later, less than 300 physicians are practising homœopathy in Great Britain." The discrepancy, Dr. Bayes thinks, is to be attributed to the different policy adopted in the two countries. In England the homœopaths have been patiently awaiting a recognition of their virtues; in America they at once forced them on the attention of their neighbours. On this Dr. Bayes argues for the homœopathic school which he has founded.

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The *Lancet* of May 5, in discussing the "health of the army," makes the following astounding statement:—"The average annual strength of the British army at home and abroad in 1875, as computed from the returns received by the Army Medical Department, was 169,235 non-commissioned officers and men; the admissions into hospital in this force were 166,619, and the deaths 2,169. The rates represented by these returns are 986.3 admissions into hospitals, and 12.47 deaths per 1,000 of the average annual strength, the latter calculated on a strength of 173,888, which include detached men." In other words, according to this authority there were somewhat over 99 per cent. of our soldiers died or invalided in 1875, the number of sound men representing the British army at the end of that year reaching the formidable total of 447 non-commissioned officers and men.

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Dr. R. H. S. Carpenter, the honorary secretary to the Medical Alliance Association, in a letter to the *Medical Examiner*, avows himself the sole author of Dr. Lush's famous Medical Act Amendment Bill. "That bill," he says, "has not been, as you imagine, condemned to laughter by the Duke of Richmond, nor did it fall before the onslaught of the chemists. The opposition of the chemist would have had no influence with this association in securing any alteration of the original bill, but the obstructive part secretly played by the Medical Council as a whole, and the trenchery we received from some of its members in particular, coupled with the faint-hearted support afforded us by a portion of the medical press, had the effect of inducing us to abandon that part of the bill which we knew too well required above all the rest of it an energetic, and general, and able support to secure its success." Dr. Carpenter is not quite exact in his historical references. The chemists never tried to influence his association: they thought the House of Commons was the more important body of the two, and in the latter assembly they found considerable sympathy. They will address their petitions to the Medical Alliance Association when the work of legislation is transferred to that authority, and not till then.

It should be understood, once for all, that what was introduced by Oscar Liebreich, of Berlin, as croton chloral is not croton chloral, but butyl chloral, and that, further, it has nothing to do with croton oil. Butyl chloral was introduced as a substitute for chloral hydrate, and differs from the latter in its action on the system. We condense some remarks on this subject from the *Medical Examiner*:—"Chloral hydrate paralyses the heart, and after death both ventricles are found full of blood. After death by butyl chloral the right cavities and lungs are gorged, and the left ventricle is contracted and empty, or very nearly so. In poisoning by chloral the pulsation of the heart is arrested by an effect on its ganglia, while the breathing continues; hence artificial respiration is useless. On the contrary, butyl chloral seems to act directly on the respiratory centre, and the heart's action can be restored and kept up by artificial respiration. Moreover, the effect of butyl chloral passes off more rapidly than that of chloral. These facts, determined by experiments on animals, show that there is a considerable difference between the two bodies considered only as poisons; and if we pursue the inquiry with reference to medicinal doses we find further variations in the effects of the two drugs, pointing distinctly to useful practical conclusions. Butyl chloral has not fulfilled the high expectations of its introducer. Liebreich expected that it would prove of great use in certain forms of toothache, and in *tic*, and that it might be used in cases of heart disease where chloral was inadmissible. In certain cases of neuralgia and toothache it has acted like a charm, but in others apparently exactly similar it has totally failed. But it has been used with considerable success as a local anodyne when mixed with equal parts of crystallised carbolic acid and solid Japanese oil of peppermint. It is advisable to avoid it in all cases where chloral hydrate is contra-indicated, but at the same time a mixture of the two has sometimes produced sleep when each has failed separately. Solutions change quickly and lose their anti-neuralgic power. It may be dispensed dissolved in glycerine and water. 3ss. butyl chloral hydrate, ʒss. glycerine, ʒvj. water, is a good mixture, two tablespoonfuls of which contain five grains.

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The *Medical Examiner* seems to have changed its tone since we last took the opportunity of quoting it on the subject of medical prosecutions. An article from that journal will be found in our December issue, which puts forward the theorem that "no systematic assumption of our privileges by those at once socially and intellectually our inferiors should be passed over or connived at;" and concludes by urging "prosecutions in such aggravated instances as might be selected." The same journal now writes: "Notwithstanding the recent formation of various so-called Medical Defence Associations, the systematic prosecutions of unqualified practitioners is not a course of action which finds much favour either with the medical profession or the medical press. And, in so far as it is dictated by what we may call the trade interests of the profession, it does not deserve to find much favour. We are happy to think that the majority of our body, as well as the journals which represent them, have a wider view of their duties and privileges than to think that the latter have been conferred upon them simply for their own advantage. The guardianship of the public health has been confided to us by the public and for the public, and the only possible excuse for vindicating the rights thus given us is the detriment to the general welfare which is likely to result from their infringement. No thoughtful medical man, for instance, would for a moment sanction the prosecution of any distinguished foreign practitioner for advising patients in our midst because he did not hold a registrable qualification. It is only when injury is caused by incompetent practitioners that prosecution becomes allowable, and even then it is doubtful whether it is well for us as a profession to do more than point out the injury, leaving others to deal with the incompetence. Prosecution by those whose direct interests will gain by a successful issue is always open to objection. The public are very apt to confound prosecution with persecution, and their sympathies in consequence are likely to be enlisted in favour of the weaker party. We cannot ourselves support the system of prosecution beyond the point which is necessary to convince the public how unreliable is the medical advice they get at the chemist's counter or from the 'bogue' degree holder. We cannot for a moment support any system the sole aim of which is to defend medical rights."

Writing of the result of the appeal in the milk of sulphur case at the Knutsford Sessions, the *British Medical Journal* says:—"We consider this decision to be a heavy blow and a great discouragement to the sale of pure drugs. There is, unfortunately, no public prosecutor to look after the interests of the public with the same amount of zeal as that displayed by the legal gentleman who appeared on behalf of the Chemists' and Druggists' Trade Association, otherwise the decision of the Knutsford Bench might be reversed, and that of the Runcorn magistrates upheld." Better still, perhaps, it would be to abolish the Judicial Bench altogether, and let all cases be settled in the editorial offices of the various medical journals. No subject has ever yet turned up, from the Eastern Question to the Encore Whisky, that they have not been able to settle with accuracy and despatch.

* *

We observe that the East London Medical Defence Association has changed its title to that of "Medical Alliance Association." They seem to have adopted this title to indicate that they are no longer in alliance with anybody.

It will be remembered that that association, through its secretary, Dr. Carpenter, recently prosecuted "Dr." John Hamilton under the Medical Act for using the title which he said had been conferred upon him by the "Metropolitan Medical College of New York." Mr. Knox, the magistrate, who first had the case in hand, decided in favour of the defendant. An appeal came on last month before the Court of Exchequer, but the judges (Baron Cleasby and Justice Hawkins) supported the magistrate's decision. It goes against the grain to wish success to these persecuting medicals, but we should hardly be disposed to grieve if they could manage to put a pin through the various pseudo-doctorates which serve as balloons to float so many aspiring geniuses into the empyrean of medical, scientific, or theological glory.

* *

Recent times have been prolific in cures and "pathies." There is nothing so certain as that people will believe what they fail to understand. No better recommendation of a new drug can be given than some irresponsible person's assertion that it is believed in by a remote tribe of naked savages. An ignorant old villager is sure to be credited with medical skill if he or she should claim it; but no one who has passed through a course of training can ever command that superstition. There is a place in Germany where the "mind cure" is carried out. The patients are soaked in mud up to their necks at certain intervals, and they submit to it. Others, with better taste, select the Tyrolean "grape cure"—a much pleasanter system of delusion. Bold men and women come to London every now and then, and take a room, in which they offer to cure all manner of diseases by laying on of hands. General Pleasanton, in America, lately started the theory that anyone could be cured of anything by surrounding him with blue glass, and the absurd notion was seized upon, and followed to an enormous extent. People even built blue-glass pigsties, and indulged in many other like fancies, to the great benefit of the blue glass makers. A French doctor has now taken to *metallotherapie*. Here are some specimens of his miracles. A young woman was totally paralysed over her right side. Her body was utterly devoid of feeling; and a sharp needle thrust in her body attracted no notice. Dr. Burg simply gave her a cylinder of gold to hold in the hand, she being blindfolded. In fifteen minutes she felt a pin prick, then recognised the touch of a plurality of objects, and regained perfect sensibility. Another patient had her left side paralysed. This called for a copper cylinder, whereupon she too was cured. Then a venerable lady, whose jaw was in a similar unfortunate condition, was cured by a lump of iron under her tongue and a bandage of iron plates on her head. It should be observed that interchanging metals upon these people did not produce good results. Their "systems" required the metals named, and no others. Electricity is, of course, the *deus ex machina*, it being the fashion, says a scoffing contemporary, to apply that much-misused word to explain anything which is not readily comprehended, from blue glass radiations to love.

PROFESSOR OF CHEMISTRY: Suppose you were called to a patient who had swallowed a heavy dose of oxalic acid, what would you administer? K. (who is preparing for the ministry, and who only studies medicine to fit himself for a missionary): I would administer the sacrament.



PASTE FOR CLEANING METALS.—Take one part of oxalic acid and six of rotten stone, mix with equal parts of train oil and spirits of turpentine to a paste.

A CHANCE FOR SPECULATORS.—Messrs. Henry S. King & Co., of Cornhill, are advertising in the *Times* 60,000 cinchona trees in two plantations for sale.

PAPER AGAIN.—In America a patent has been taken out for making papier mâché bottles, pitchers, and other vessels. Another patent protects the manufacture of paper barrels and barrel staves.

EVERY MAN HIS OWN PHAROAH'S SERPENT.—Take a chlorate of potash lozenge, as supplied by any of our eminent wholesale manufacturers; place it one end up on a white plate; light with a safety match, and observe the result.

ARSENICAL COLOURING.—In a rather sensational article to the *Times* of June 16, Mr. G. Owen Rees calls attention to the presence of arsenical green, to the extent of 60 grains per square yard, in a muelin of a "very beautiful pale green tint" now much used for ladies' dresses.

ONE of our Parisian *confrères* received the following homoeopathic prescription to be dispensed:—

Lact. mammel. virgin. (milk from a virgin's breast)	..	..	..	..	30 c. c.
Aq. still. (aqua dest.)	..	..	..	..	150 c. c.
Alc. (alcohol)	..	..	..	..	q. s.
F. S. A. Dr. T.					

EMULSIONS.—As the result of numerous comparative experiments on emulsions, Mr. E. Gregory gives in the *Canadian Pharmaceutical Journal* the following as the simplest, quickest, and most efficacious:—Rub together in a mortar 3ij. pulv. acac. and 5j. ol. volat., or 3ij. p. acac. and 5j. ol. fixat., then add 3ij. water at once, and with a few turns of the pestle the whole is emulsified.

THE COLORADO BEETLE.—The German Government has acted with worthy energy on an important crisis. A potato field on which the Colorado beetle had made its appearance was covered with sawdust and spent tan sowed with petroleum, and set on fire, the Government indemnifying the proprietor. This, we may hope, has stopped the progress of the plague for a time, but the danger of this invasion is very actual. The foe is the more terrible from its insignificance.

A CALIFORNIAN ADVERTISEMENT.—This specimen is from the *San Francisco News Letter*:—"A San Francisco woman is so cleanly that she uses two rolling-pins—one for the pastry and the other for her husband's head; yet she probably drinks impure water, with all her cleanliness. No one need do this if he will only buy a patent Silicated Carbon Filter, from Bush & Milne, under the Grand Hotel. It purifies water instantaneously.

CUTTING METALS.—A French machinist has discovered that by keeping his turning tools constantly wetted with petroleum he was able to cut metals and alloys with them, although when the tools were used without the oils their edges were turned and dulled. The hardest steel can be turned easily if the tools be thus wet with a mixture of two parts of petroleum and one part of turpentine. We may add that holes may be drilled in glass bottles with an ordinary blacksmith's drill moistened with turpentine.

A NEW USE FOR OLD CORKS.—A patent recently issued in France gives the following process for manufacturing cork pasteboard:—"Ground cork is thoroughly incorporated in paper pulp by means of mixing machines and heavy hollow presses. The board so formed has all the water pressed out and is dried as the common paper. Old bottle corks, sole-clippings, and cork in other forms can thus be utilised. The pasteboard is springy, light, a poor conductor of heat and sound, as well as possessing other properties given it by the cork."

ANOTHER CINCHONA PRODUCT.—The *Anglo-Brazilian Times* says:—A quantity of the bark of the *Cinchona feruginea*, of Martius, has come down from Minas Geraes to Rio for the purpose of extracting the acid resin which exists in it in combination to the extent of 5 per cent. This resin is known as Vieirina or Vieirino, and has been successfully employed instead of quinine as a tonic and febrifuge. The tree is native in Minas Geraes, and abounds especially in the stony lands of Diamantina.

MILK BEER.—The last new product "destined to occupy an important place in alimentary hygiene" is milk beer; that is, beer made with milk instead of water. It has a yellowish colour, and a density a little greater than ordinary beer, in the proportion of 980 to 950. The taste is pleasant and less bitter than that of most malt liquors. It is considered an alimentary beverage, agreeable to the taste, uniting the aromatic and bitter principles of the hop with the nutritive, tonic and analeptic principles of the milk and malt.

TESTIMONIAL.—Mr. T. F. Spivey, chemist, &c., of Howden, Yorkshire, was recently presented with a testimonial, consisting of a handsome timepiece, suitably inscribed, by three of his former apprentices, Messrs. Hey (York), Laverack (Malton), and Cooke (Bradford), as a token of their esteem. The interesting ceremony took place in a room adjoining the post office. Mr. Hey made the presentation, and offered a few appropriate remarks on the part of himself and *confrères*.

THE FOLLOWING MODE of procedure for taking rust out of steel is recommended by the *Scientific American*:—Place the article in a bowl containing kerosene oil, or wrap the steel up in a soft cloth well saturated with kerosene; let it remain 24 hours, or longer; then scour the rusty spots with brickdust. If badly rusted, use salt wet with hot vinegar; after scouring, rinse every particle of brickdust or salt off with boiling water; dry thoroughly; then polish off with a clean flannel cloth and a little sweet oil.

THE LAST MAN.—The *Scientific American* for May 26 investigates the various theories on the final state of the earth, and has come to the following conclusion on the fate of the Last Man. Theories are extant which make all the following possible:—1. If the Last Man does not starve to death he will probably be drowned. 2. The Last Man will certainly be drowned. 3. If the Last Man is not suffocated by cometary gas he will be blown up. 4. The Last Man will be sunstruck. 5. The Last Man will be suffocated. 6. The Last Man will be burned up. 7. The Last Man will be frozen to death. 8. The Last Man will be crushed in some subterranean cavern. 9. The Last Man will be killed by the crash of orbs. 10. *There will be no Last Man.* Poor Last Man!

A PARLOUR OF PHARMACY.—The latest New York trans-formation is the conversion of the first storey of the formerly rich and presently bankrupt Daniel Drew's palatial mansion in the central and fashionable Union Square into a "Parlour of Pharmacy," by the sometime famous and always irrepressible H. T. H., more clearly known as inventor, author, and pusher of Helmholtz's Buchu, whom a New York journalist denominates the "Napoleon of the drug trade." It seems that in this latest Helmholtzian creation all previous efforts are to be eclipsed. This is to be the crowning *tour de force*; in brief, "his last and grandest palace of pharmacy."

DR. KAYSER has succeeded, without a battery, in coating metals with an alloy resembling German silver, thus giving them a handsome finish and making the surface more durable and permanent than that of tin or silver. He first melts together one part of copper and five of pure tin—preferably the Australian. The alloy is granulated, as usual, but not too fine, and then mixed with water and cream of tartar—as free from lime as possible—into a paste. To each 200 parts of the granulated alloy is added one part of oxide of nickel, and the articles are laid in it. After boiling a short time they become beautifully plated. Some fresh oxide of nickel must of course be added from time to time. Brass and copper articles can easily be plated in this manner without previous preparation; those of iron must first be copper plated. By adding some carbonate of nickel to the above bath, or to a common white bath, and boiling, a coating richer in nickel is obtained, and darker, varying in colour from that of platinum to a blue-black, according to the amount of nickel salt added.

CHARTREUSE, the well-known liquor made by the monks of the French Carthusian monastery, near Grenoble, is still manufactured, according to the original recipe of three hundred years ago. This recipe is kept carefully sealed up under a stone of the high altar, and is only removed when a fresh superior is elected. The head of the order having lately died, the new "General" will shortly go in grand procession to unseal the stone and formally read the directions. The sale of Chartreuse brings in enormous profits, which are used to defray the expenses of the visitors entertained at the monastery, and for the gifts to the poor, while a tithe is sent to the Pope.

PLEASE PROSECUTE ME.—A Paris grocer sells small bits of macaroni for soup, stamped with the image of Napoleon III. When the macaroni swells, the features enlarge, until the nose, moustache, and profile of the late Emperor stand out in startling relief. The last place in the world where the ghost of Napoleon would be expected to appear is from the depths of macaroni soup, and the profound judges are in doubt what to do. If they let it alone it becomes incipient treason, for with Napoleon in their stomachs half the road to their affections will have been traversed; and, on the other hand, they hesitate in making the cause popular and themselves ridiculous by a macaroni war.

CORRECTIVE IN LEAD-POISONING.—Workmen employed in the manufacture of white lead are always liable to lead-poisoning, both by inhaling the dust and in touching the lead with the hands. Various correctives for this have been employed, and among these the latest and most simple is a careful washing of the hands in petroleum. Three washings a day are reported to be sufficient to prevent all serious danger of poisoning. The benzole in the petroleum is said to scour the skin and remove the dust of lead, and the fatty substance in the oil prevents the absorption of the lead salts. The experiments made with petroleum used in this manner give such good results that it is proposed to use the same material as a guard against poisoning in other industries where the salts of copper or mercury are employed.

A CRUEL DEATH.—The Society for the Prevention of Cruelty to Animals might distinguish itself by preventing the sale of the Insecticide Viat, if the following, from a French journal, is an accurate statement of its action:—This insecticide, introduced in the air they (the insects) breathe, brings on a crisis which makes them rush precipitately from their hiding places even during the day, and, after a few convulsive movements, their belly swells, cracks, and they die. The distinctions between the Insecticide Viat and the ordinary insecticides are its great tenuity, the spindle shape, and the great lightness of its atoms. The latter are so light that they remain suspended in the atmosphere for hours, and penetrate the tracheas of the insects without fail, causing their death with equal infallibility.

AT PETROLIA, PENNSYLVANIA, there was a tremendous fire on May 19. A flash of lightning struck one of the large oil tanks on Trautman Farm, containing 22,000 barrels of oil, which ignited. The fire caught two other tanks, one holding 25,000 barrels of oil, which was completely destroyed. The other, however, was extinguished by the application of steam. The burning oil ran down the creek for about a mile, setting on fire and destroying everything it came in contact with. Its course was fortunately stopped by Ralston's Dam, which was large enough to hold the whole of the burning liquid. The only hotel in Petrolia was destroyed, together with the stabling, several dwelling-houses, an oil station, 12 oil wells and tanks, and a number of other buildings.

THE PARIS EXHIBITION.—Sir Julius Vogel, writing to the *Times*, suggests that at the close of the forthcoming international exhibition at Paris there should be a supplementary exhibition of all the articles which are praised by the jury. He says:—"I cannot fancy a more useful, enjoyable, and instructive exhibition than this would be, comprising, as it would, in a comparatively small space all that was most excellent and economically valuable in every variety of production and manufacture. The prospect of this subsequent exhibition would be an enormous incentive to exhibitors of a really good class. To occupy a place in the prize exhibition would mean the certainty of their goods being examined and appreciated by many thousands of intelligent people."

A SIMPLE SLEEP PRODUCER.—Baron Reichenbach insists on the importance of sleeping with one's head to the pole, so as to get the full benefit of the earth's magnetism. He says:—"The inhabitants of the northern hemisphere should lie with their heads to the north, and those of the southern with their heads to the south;" and also relates that Dr. Fischweiler, of Magdeburg, who died recently at the age of 109 years, always attributed his long life to his faithful observance of the pole-to-pole position of sleeping.

SINGULAR CURE FOR EPILEPSY.—We translate the following from the *Pharmaceutische Zeitung*: In 1820 there lived at Lausa, in Saxony, a pastor of the name of Roller, whose brother was liable to attacks of epilepsy. A working man, happening to call at the very time when the patient was suffering from one of these attacks, assured the pastor that a speedy cure might readily be effected by the following simple expedient:—A magpie was to be shot, the body of the bird being then calcined in an oven and pulverised. As much of this powder as could be laid on the point of a knife was to be taken daily, in water, the patient meantime leading a strictly continent and temperate life, abstaining even from the amusement of dancing. The pastor administered this simple remedy to his brother, under the prescribed conditions, and a complete and lasting cure was effected by the end of a month. Encouraged by this fortunate result, the pastor prepared a large quantity of the powder, which he transmitted to Hamburg, Königsburg, and Vienna, and it is said to be employed at this day at the Deaconess' Institution at Dresden. In the East, it seems, a tradition has long prevailed that various organs of certain birds are useful in the treatment of epilepsy. [John of Gaddesden, in the fourteenth century, recommends an amulet made of the stones occasionally found in the stomachs of swallows to be suspended from the necks of epileptic patients.]

Scientific Notes from Foreign Sources.

IMPERMEABLE PAPER BOXES IN PHARMACY.

MR. E. B. SHUTTLEWORTH, in the *Canadian Pharmaceutical Journal*, suggests the use of paper boxes made impermeable by various substances—as paraffin, dilute sulphuric acid, silicate of calcium, bichromated glue—for a variety of purposes in pharmacy. Their principal advantages would be lightness and cheapness, this latter leading to the advantage that after once using they might be destroyed. Hard and soft extracts, confections, ointments, and deliquescent salts are among the articles for which waterproof boxes might be useful.

THE JOYOTE OF MEXICO.*

PROFESSOR A. HERRERA, of Mexico has been investigating the seeds of *Thevetia yecotli*, De C. Nat. Ord. Apocynaceæ, which are much used as an external remedy for hæmorrhoids. He extracted from them by pressure and percolation with ether nearly 80 per cent. of oil; that extracted by pressure being bland, non-drying, and at 0° C. of the consistency of lard. Besides this, he extracted a white, crystalline, inodorous glucoside, insoluble in water, slightly soluble in ether, bisulphide of carbon, fixed and volatile oils, but easily soluble in alcohol, not volatile and combining with neither acids nor bases. This principle he has named *Thevetosine*: it is very acrid. L. H. Carpio has been investigating the properties of the two oils and the seeds, as well as the active principle, and finds that the oil, whether obtained by pressure or ether, is poisonous to pigeons, but not to rabbits; that *Thevetosine* is very venomous; that it has a violent emetic action, depending on the nervous system, like tartar emetic; that it gradually but completely paralyses the muscles of respiration, causing death by asphyxia.

CUSPARINE.

MM. OBERLIN AND SCHLAGDENHAUFFEN have discovered in *Angustura* bark a crystallisable alkaloid, of which no notice

has been previously taken. It is obtained by exhausting the bark with ether, evaporating to dryness, and treating the residue with cold acetic acid; evaporating to dryness again, and finally treating with alcohol, evaporating and crystallising. The new body, which they name *Cusparine*, is soluble in ether, sulphide of carbon, benzene, alcohol, acetone, amyl alcohol, and petroleum ether. Its chloride, nitrate, and oxalate are much less soluble than the acetate. Concentrated nitric acid gives with the pure crystals a yellow tint, but does not completely dissolve it. Concentrated sulphuric acid gives a *rouge amaranthe* tint, which changes to green at the end of half an hour. Oxidising agents give an emerald green tint.

A PROCESS FOR THE SOLIDIFICATION OF CARBON BISULPHIDE.*

M. MERCIER finds that if bisulphide of carbon be added to a mixture of a drying oil and protochloride of sulphur at the moment of mixing, it is entangled in the jelly formed by the oil and protochloride. With boiled linseed oil and 10 per cent. of the protochloride a transparent elastic mixture can be obtained containing 70 per cent. of bisulphide of carbon. The substance ignites only with difficulty, and loses the contained bisulphide but slowly.

CORROSIVE SUBLIMATE AS A VESICANT.†

DR. THOULOUSE recommends as a vesicant a disc of fine cloth soaked in oil, with one side covered with corrosive sublimate in impalpable powder.

SUGAR FOR LEMONADE.

M. BALLARD remarks that sugar which has been whitened by the addition of a minute quantity of ultramarine should not be used for syrups containing acids. The acid decomposes the ultramarine, liberates sulphuretted hydrogen, and thus communicates an unpleasant taste to the syrup.

XANTHIUM SPINOSUM.

M. YVON, in a communication to the *Société d'Émulation*, states that the supposed alkaloid of this plant does not exist: a resin has been mistaken for it.

SALICYLIC ACID AND THE SALICYLATES.

THE reaction against the universal use of salicylic acid has commenced. Dentists and doctors, according to M. Blandeau, have noticed that it has an injurious action on the teeth and bones, even causing necrosis in some cases. Used in wine, according to Mr. H. Endemaun, in the small proportion of 1 grain to 12 gallons, it develops, in course of time, salicylic ether, which gives the wine the flavour of oil of wintergreen. Anyone who knows this latter will feel how undesirable it is. A solution of salicylate of iron made by adding salicylate of soda to a saturated solution of sulphate of iron has been recommended as an astringent antiseptic for use after operations, &c. The solution (which contains sulphate of soda) is of a bright claret colour, without smell, and hardly irritant even when concentrated. Mr. R. Kirk, of the Edinburgh Royal Infirmary, records a case, in the *Edinburgh Medical Journal*, in which it was markedly successful.

CANADA BALSAM AS AN EXCIPIENT.

M. DANNEY communicates a note on this subject to the *Le Monde Pharmaceutique*. Seeking for an excipient which would serve for deliquescent and other salts as well as for vegetable powders, he was led to try a mixture of one part of beeswax with three parts of Canada balsam. Even potassium acetate can be made into good pills with this excipient. The pills do not harden, nor do they deliquesce, but maintain an excellent consistence.

* *American Journal of Pharmacy*.

* *Le Monde Pharmaceutique*.

† *Le Monde Pharmaceutique*.

MEMOIR ON THE PREPARATION AND COMPOSITION OF EMETINE.

By MM. JULES LEFORT AND FREDERIC WÜRTZ.*

CERTAIN facts in the history of emetine, recently published by M. Glénard, do not tally with results which M. Lefort had previously obtained.

Imagining that this discordance was owing to the state of purity of the alkaloid, and hearing that M. Glénard intended to pursue the subject, it seemed to us that the time had come for the publication of a new process we had devised for the preparation of emetine in a state of absolute purity, and to finally establish its elementary composition. Judging, *à priori*, from the known composition of the cinchonas and other vegetables, it is probable that emetine is not the only alkaloid contained in the ipecacuanhas. This seems to be also M. Glénard's idea; but although he has in a sense reserved this investigation for himself, we do not consider ourselves bound to neglect it under the unusually favourable circumstances in which we are placed by the courtesy of M. Dorvault, Director of the Pharmacie Centrale of France.

Preparation of Emetine.

M. Glénard has discovered that by treating powdered ipecacuanha root first with lime and then with sulphuric ether, all the emetine contained therein is obtained in a comparatively pure state. When New Granada ipecacuanha is used, which contains less of the brown resin than the Brazilian, the alkaloid is specially white. The object of M. Glénard's first researches was to suggest the idea that the alkaloid so obtained might be contaminated with one or more bodies resembling it in solubility and other properties.

To clear up this point and to provide for the industrial production of emetine in case it should be introduced into medicine, we undertook some experiments, and finally adopted the following method for its preparation:—500 grammes of alcoholic extract of ipecacuanha are dissolved in half a litre of water. Cold saturated solution of potassic nitrate is added until a precipitate ceases to fall, and the mixture is set aside for 24 hours.

The abundant blackish brown pitchy deposit consists of nitrate of emetine and colouring matter. The precipitate is purified by washing three or four times with a small quantity of water, and will be found to weigh about 200 grammes. The precipitate is dissolved in a little hot alcohol and thrown into a thick milk of lime containing 200 grammes of calcic hydrate.

The mixture is evaporated to dryness on a water bath with constant stirring, the mass powdered, and placed in a flask containing sulphuric ether. After some hours the ethereal solution has a clear yellow colour and contains all the emetine. The residue is washed once or twice with ether, the solutions mixed, and the ether recovered by distillation. The residue in the retort is a yellowish brown syrup. It is treated with water acidulated with sulphuric acid, and on filtering a solution of sulphate of emetine, free from resin, is obtained. Ammonia causes in it a voluminous yellowish white deposit of emetine, which is washed and dried at a low temperature. It may be obtained still purer by dissolving it again in ether and evaporating in a vacuum. This process is decidedly the best yet published.

The idea that emetine is uncrystallisable has arisen from the fact that impure specimens have been operated on. The authors have prepared crystals of it varying in size from that of a millet seed to a small lentil, and composed of minute needles, radiating from a common centre.

Composition of Emetine.

The result of several analyses of a material dried in a vacuum give the following figures:—

C ₂₁	..	..	..	..	..	69.41
N	..	..	..	..	..	5.78
H ₁₉	..	..	..	..	..	8.16
O ₅	..	..	..	..	..	16.65

100.00

M. Glénard's formula is—



but his analyses were made on a specimen dried at a temperature of 110° to 120° C., at which temperature emetine changes rapidly.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Provisional Protection for six months has been granted for the following:—

- 816. F. Anderson and J. Yair, of Cloak Lane, London. An improved tonic preparation of liquid extract of beef or meat. Dated February 28, 1877.
- 1618. F. W. Kalbfleisch, of Brooklyn, New York, United States. Improvements in concentrating sulphuric acid, and in the apparatus used therefor. Dated April 25, 1877.
- 1632. G. W. Weatherhogg, of Grumant Road, Camberwell, Surrey. Improvements in apparatus for carburetting atmospheric air. Dated April 26, 1877.
- 1835. L. Loewenthal, of Elgin Road, Saint Peter's Park, London. Improved combinations of materials for the manufacture of gases for extinguishing fire, for purifying noxious air, gas, or vapour; also for preserving food and other substances, and in apparatus to be used in part therewith. Dated May 11, 1877.
- 1914. N. Thomson, of Brooklyn, New York, United States. Improvements in stoppers for bottles and other hollow articles. Dated May 16, 1877.
- 1916. T. H. Larmuth, of High Street, Tynbridge Wells, Kent. Improvements in effervescing beverages, and in apparatus for supplying the same. Dated May 16, 1877.
- 1925. J. Pitts, of Leeds, Yorkshire. Improved means and apparatus for stoppering bottles. Dated May 17, 1877.
- 1926. A. Robert, of Rue de Delta, Paris. An improved machine for cutting corks. Dated May 17, 1877.
- 1958. B. C. Molloy, of the Temple, and J. D. Warren, of South Kensington, London. Improvements in the method of using and producing nitric acid. Dated May 18, 1877.
- 1972. P. Tonlactti, of Hamburg, Germany. An improved method for preserving anatomical preparations. Dated May 19, 1877.
- 1974. P. Toninetti, of Hamburg, Germany. An improved method for preserving milk, cream, and butter. Dated May 19, 1877.
- 1982. J. Fenton, of Batley, Yorkshire. A new or improved method of and apparatus for defecating and deodorising sewage. Dated May 19, 1877.
- 2015. C. Trapnell, of College Green, Bristol. Improvements in apparatus for raising and supporting invalids and others in bed, also applicable to sofas, couches, chairs, and other inclined rests. Dated May 23, 1877.
- 2083. H. Sandeman, of St. Switbin's Lane, London. An improved cask sampler. Dated May 29, 1877.
- 2088. F. Foster, of Forston Street, Shepherdess Walk, London. Improvements in capsules or stoppers for closing bottles. Dated May 29, 1877.
- 2106. J. H. W. Biggs, of Mason's Buildings, Liverpool. Improvements in apparatus for the manufacture of common salt and carbonate of soda, and for packing salt and other substances, and for regulating the density and temperature of liquids. Dated May 30, 1877.
- 2181. F. D. Nuttall, of St. Helen's, Lancashire. Improvements in the manufacture of carboys for carrying chemicals, and in the moulds for manufacturing the same. Dated June 5, 1877.
- 2182. J. M. Granville, of Savile Row, London. Improvements in thermometers and spirometers. Dated June 5, 1877.
- 2183. M. K. G. Lieber, of Widnes, Lancashire. Improvements in the manufacture of soda and potash. Dated June 5, 1877.
- 2194. S. W. M. de Sassex, of Rue du Fiaistère, Bruxelles, and A. Brasseur, of Rue Fonsny, St. Gilles lez Bruxelles. Improvements in galvanic batteries. Dated June 5, 1877.
- 2202. E. Yates, of Glasgow. Improvements in the manufacture of tins or canisters for containing oils, paints, and other substances, and in tools or mechanism employed therefor. Dated June 6, 1877.
- 2212. J. Ganter, of Paris. An improved mattress for children and invalids. Dated June 7, 1877.
- 2213. A. de Watterville, of Old Cavendish Street, London, and J. Mayer, of Great Portland Street, London. Improvements in galvanic batteries. Dated June 7, 1877.
- 2251. S. Pitt, of Sutton, Surrey. Improvements in the utilisation of bisulphide of carbon and glycerine for the production of motive power and for other purposes. Dated June 9, 1877.

* Abstract from the *Journal de Pharmacie*.

2257. A. C. Collincau and M. E. Savigny, both of Boulevard Saint Denis, Paris. An improved process of "greening" preserved vegetables and fruits. Dated June 9, 1877.
2301. W. Cotton, of Loughborough, Leicestershire. Improvements in means or apparatus for stoppering bottles and such-like vessels to contain aërated or fermentable liquids. Dated June 13, 1877.

Letters patent have been issued for the following:—

4806. J. W. Bantock, of London. Improved method of manufacturing nitro-celluloses for use in war, mining, and general purposes. Dated December 12, 1876.
4839. C. Girard, E. Willm, and G. Bouchardat, all of Paris. Improved processes for obtaining colouring matters or of processes for obtaining novel colouring matters. Dated December 14, 1876.
4845. E. Spink, of York. Improved combination of ingredients or compounds for curative purposes. Dated December 14, 1876.
4940. A. Cordier, of Princes Street, London. An improved method of and apparatus for utilising the sun's rays for generating steam, distilling liquids and other heating purposes. Dated December 21, 1876.
5001. J. Hargreaves, of Widnes, Lancashire. Improvements in means and apparatus employed in the absorption of gases by solids, or where gases are made to re-act upon solids, particularly applicable in making bleaching powder. Dated December 27, 1876.
237. F. N. Thurel, of Orgelet, France. An improved apparatus applicable to the eyes for curative and protective purposes. Dated January 18, 1877.
263. J. Houzeau, E. Devedeix, and J. Holden, all of Reims, Marne, France. A new method of purifying town sewage and waters previously used in industries. Dated January 20, 1877.
270. C. F. Varley, of Great Winchester Buildings, London. Improvements in apparatus for generating electricity. Dated January 20, 1877.
738. W. W. Macnay and R. Sykes, both of Castleford, Yorkshire. Improvements in the stoppering of bottles. Dated February 22, 1877.
902. C. Wray and L. Wray, jun., both of Walthamstow, Essex. Improvements in thermo-electric batteries. Dated March 6, 1877.
1228. H. Codd, of Grove Lane, Camberwell, Surrey. Improvements in apparatus for filling aërated liquids into bottles which have internal stoppers. Dated March 28, 1877.
1801. F. Y. Henderson, of Glasgow. A new or improved receptacle for containing and imparting or giving off moisture, vapour, or odour. Dated April 4, 1877.
1374. F. Leconrt and A. Guillemare, of Rue Lafitte, Paris. Improvements in the manufacture of chlorophyll and its application for imparting a green colour to preserved vegetables and fruits. Dated April 9, 1877.
1405. J. Jackson and T. R. Mellor, of King William Street, London. Improved means and apparatus for evaporating liquids, applicable to the concentration of saccharine or saline solutions, distillation, and such-like operations. Dated April 11, 1877.
1414. J. Eckart, of Munich, Bavaria. Improvements in the method of preserving meat, fish, game, and other like articles of food, and in the apparatus for that purpose. Dated April 11, 1877.
1462. J. Livesey, of Victoria Chambers, Westminster, London. Improvements in filters for water and air. Dated April 13, 1877.
1542. G. R. Hislop, of Paisley, North Britain. A new or improved mode of and means and chambers for calcining or revivifying spent lime. Dated April 20, 1877.
1565. A. Fryer, of Manchester, and J. B. Allott, of Radford, Nottinghamshire. Improvements in the methods of and apparatus for dealing with the refuse of towns and preventing nuisance from the same part of the method and apparatus being applicable also for general disinfecting purposes. Dated April 21, 1877.

Specifications published during the month:—

Postage 1d. each extra.
1876.

3676. N. Seward. Apparatus for breathing warm air. 6d.
3946. A. E. A. Detiaque. Italian paste covers for enclosing medical substances. 6d.
3992. C. F. Claus and A. E. G. Lowndes. Manufacture and application of detergents. 4d.
4047. F. Gardner. Apparatus for preventing sickness at sea. 6d.
4122. J. Gront. Apparatus for warming and keeping warm food for infants. 6d.
4189. J. B. Lindsay. Vessels for conveying or storing corrosive liquids. 6d.
4191. F. Pickering, W. Swift, and S. Hunter. Envelopes or wrappers for extracting oil from seeds. 6d.
4204. G. D. Mease. Furnaces for decomposing chlorides of sodium and potassium, manufacturing alkalis, &c. 6d.
4222. G. Zanni. Application of magneto-electricity, &c., to baths. 6d.
4324. J. H. W. Biggs. Apparatus for evaporating brine. 6d.
4339. E. Brcfit and J. Edwards. Stoppers for bottles. 4d.
4360. H. C. Sanders. Stoppers for bottles, jars, &c. 6d.
4362. R. Powell and W. Atkins. Manufacture of hyposulphite of soda. 6d.
4393. P. C. Duolos. Stoppers for bottles, jars, &c. 6d.
4406. J. M. Richards. Valve nozzles for bottle stoppers. 6d.
4411. T. Kernahan. Manufacture of lozenges. 6d.
4416. J. Wood. Taking impressions or casts of the month for use in making artificial teeth. 6d.
4418. G. W. Von Nawrocki. Apparatus for the manufacture of concentrated sulphuric acid, &c. 4d.
4450. J. M. O. Tannin. Oxygenated atmospheric and other baths. 6d.
4510. C. W. Batten, J. Griffin, and F. Prudencio. Bottles and stoppers. 2d.
4573. C. Rands. Treatment of vegetable substances to obtain alcoholic liquids. 2d.

4586. H. M. Whitehead. Preserving meat. 2d.
4624. J. Harvey. Preserving meat, fish, &c. 4d.
4654. J. S. Butler. Treating vegetable fibres. 4d.
4696. C. Rydill. Dyeing, &c. 6d.
4726. L. W. Day. Stoppers for bottles, &c. 4d.
4755. T. Hyatt. Adhesive plasters. 4d.
4912. W. V. Wilson and H. Cant. Aniline dyes. 2d.



LIQUIDATIONS BY ARRANGEMENT OR COMPOSITION.

Notices of first meetings of creditors have been issued in re the following estates. The dates are those of the "London Gazette" in which the notices first appeared.

- BELL, ROBERT THOMAS, 46 Ivy Street, late 67 Grange Lane, both Birkenhead, veterinary surgeon. July 2.
- DAVIES, THOMAS, 34 Beaufort Street, Brynmawr, chemist. June 25.
- FRIEND, WILLIAM, Thornton Heath, Surrey, chemist. July 2.
- HANNER, WALTER JONES, Southwold, Suffolk, chemist. June 13.
- MAURICE, SAMUEL SOLOMON, 39 Wrexham-fechan, and High Street, Wrexham, dentist, June 25.
- MONEY, FREDERICK JOHN, 1 Marlborough Place, Brighton, surgeon. June 21.
- POWELL, GEORGE BENJAMIN, Nottingham, surgeon. June 13.
- SMITH, JAMES SAMUEL TAMATOA WILLIAMS, Hexham, Northumberland, chemist and druggist. July 4.
- WATSON, JOHN CHERRY, 37 and 38 Mark Lane, and 24 King's Road, Camden Town, drug merchant. June 26.

DIVIDENDS.

- ANDERSON, MARK F. (Liq.), Coventry, surgeon. Div. 2s. 8d.; June 22 or two subsequent Fridays; E. J. Pierson, 46 Jordan Well, Coventry.
- BRUNJES, MARTIN (Bkt.), Brook Street, Grosvenor Square, member of R.C.S. 1st div. 5s.; any Monday between 11 and 1. W. Edwards, 18 King Street, Cheapside, London.
- BURTON, WILLIAM (Bkt.), Sutton, Surrey, chemist. 2nd and final div. 1s. 3d.; any Monday or Wednesday between 10 and 1; H. Leatherdale, 14 Old Jewry Chambers.
- CURSON, ISAAC, and MEADOWS, GEORGE Q. (Liq.), Wisbech, aërated water manufacturers. 1st and final div. 2s. 4d.; S. Ollard, 3 York Row, Wisbech.
- KERSHAW, JOHN H. (Liq.), Bingley, late Halifax, chemist. 1st and final div. 1s.; T. J. W. Bennett, accountant, 54 Moorgate Street, London.
- WINGATE, STEPHEN (Liq.), Gloucester, chemist. 1st and final div. 4d.; G. W. Haines, 21 St. John's Lane, Gloucester.

PARTNERSHIPS DISSOLVED.

- BIRD & SMYTH, Sydenham, surgeons.
- CAMPBELL & EAGAR, Stonbridge, physicians.
- CHAMBERS & MANSON, Great Tower Street, chemical manufacturers.
- CLARKE & COSTE, Water Lane, drug merchants.
- COCKING & DAVIS, Ludlow, druggists.
- DELF & HIGGINSON, Liverpool, drug brokers.
- MARTIN & SMITH, Crawley, surgeons.
- POWELL & CARTER, Wandsworth Road, surgeons.

Obituary.

- ALEXANDER.—June 2, 1877, Mr. James G. F. Alexander, chemist and druggist, Greenock. Aged 60 years.
- CHAPMAN.—June 25, 1877, Mr. William Edward Chapman, M.P.S., formerly of Queen Street, Hull. Aged 83 years.
- GROVE.—June 10, 1877, Mr. Harry Grove, chemist and druggist, Park Street, Walsall. Aged 46 years.
- HUGGINS.—June 19, 1877, Mr. Edwin John Huggins, chemist and druggist, Wainfleet. Aged 31 years.
- LAWRENCE.—June 21, 1877, Mr. Henry Lawrence, pharmaceutical chemist, Lower Phillimore Place, Kensington. Aged 43 years.
- PAIN.—May 30, 1877, Mr. John Hopper Pain, chemist and druggist, Hadleigh, Suffolk. Aged 45 years.
- PEACOCK.—June 5, 1877, Mr. Hamerton Peacock, chemist and druggist, High Street, Poplar. Aged 40 years.
- SANDERSON.—June 8, 1877, Mr. Robert Sanderson, chemist and druggist, High Street, Watford. Aged 42 years.
- SHAW.—June 17, 1877, Mr. John Shaw, chemist and druggist, Broughton Furness. Aged 54 years.
- WATSON.—June 6, 1877, Mr. Robert Appleford Watson, chemist and druggist, Wilton Place, Knightsbridge. Aged 69 years.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

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November, 1874.

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FOR PARTICULARS OF

THE ANALYSED TEA ASSOCIATION,

And Extracts from "Lancet,"

See Page 39.



Editorial Note

BOTANICAL CONTEST.

We propose to offer next month Hanbury's "Pharmacographia" as a prize for competition by botanical students.

The form which the contest will take will be the illustration of some common natural order. One or more plants will be dissected, the parts dried and mounted, special attention being given to those points of structure which distinguish the order from all others. And as it is little use knowing anything unless we can talk of it, a written description of the order must be forwarded with the specimens. Definite particulars will be given next month.

THE PHARMACEUTICAL CON- FERENCE—PLYMOUTH.

The fourteenth Pharmaceutical Conference is to be held at Plymouth on August 14 and 15, under the presidency, as last year, of Professor Redwood.

The chemists of Plymouth, Devonport and Stonehouse, although they express themselves very moderately, are, to our knowledge, very anxious to maintain the reputation of their famous county for hospitality. As a grand centre for touring expeditions Plymouth has long been noted. The varied beauties of the Cornwall and Devonshire coasts confuse the undecided by their abundance, and Plymouth itself is by no means a mere maritime town, peopled by soldiers, sailors, and Government

officials. The Hoe is one of the finest and healthiest promenades in all England, and the panorama spread out before the spectator is almost unequalled in interest. Eddystone Lighthouse and Plymouth Breakwater are before him, and to the right rises the ever beautiful Mount Edgecombe. The profusion of engineering masterpieces near Plymouth is remarkable. Besides the lighthouse and the breakwater, there are close by Brunel's beautiful tubular suspension Albert Bridge over the Tamar, half-a-mile long, if we remember rightly; some new fortifications, which, like everything British, are reckoned impregnable; and a collection of specimens of naval architecture, from some remnants of Nelson's fleet to the uglier but more formidable ironmongery of the present day. Behind the town lie the tors of Dartmoor, tempting to energetic pedestrians, and offering to them, in grand moorland scenery, rich rewards for their labours.

The following are titles of papers already announced to the secretaries for reading at the approaching meeting:—

"The Supply of Cinchona Bark as Connected with the Price of Quinine," by John Eliot Howard, F.R.S.

"Report of the Committee on the Extraction and Investigation of the Aconitines of *Aconitum napellus*," by Dr. Wright, F.C.S., J. Williams, F.C.S., and T. B. Groves, F.C.S.

"Report on the Active Principle of Capsicum Fruit," by J. C. Thresh, F.C.S.

"The Fats in Capsicum Fruit," by J. C. Thresh, F.C.S.

"Report of Continued Researches on Essential Oils," by Dr. Tilden, F.C.S.

"On a Product of the Oxidation of Barbaloin and Socaloin," by Dr. Tilden, F.C.S.

"Report on the Proximate Constituents of Ivy Berries," by R. H. Davies, F.C.S.

"Report of a Research (Part 2) on Essential Oil of Sage," by M. M. P. Muir, F.C.S., and Mr. Siguira.

"An Impurity in Oxide of Zinc," by W. W. Stoddart, F.C.S.

"An Improved Preparation of Ergot," by Mr. A. W. Postans.

"The Microscope in Pharmacy," by Mr. J. Cooke.

"Additional Notes on the Assay of Opium," by Mr. Barnard S. Proctor.

"Tincture of Acetate of Iron," by C. R. C. Tichborne, F.C.S.

"Sugar in Pharmacy," by Dr. C. Symes.

"A Point in Pharmaceutical Ethics," by Mr. S. R. Atkins.

A paper "On Brucia" will probably be read by W. A. Shenstone, F.C.S., and the secretaries state that eight or ten other papers are expected.

REPORTING THE MEETINGS OF THE PHARMACEUTICAL COUNCIL.

By a considerable majority the Pharmaceutical Council has again rejected the proposition which its more advanced members have for some years urged upon it of admitting independent reporters to its meetings. The feeling against such a revolution is now, however, far weaker than when it was first suggested. Our analysis of the voting shows that, if all the members of the council had recorded their opinions, very nearly, if not quite, half of them would have been willing to admit a reporter from this journal. Slight questions of expediency alone, which seem to us rather fanciful, keep the balance against us for the moment. One or two representatives discussed the question as though some important commercial advantage were involved in the decision to the journals concerned. Speaking for ourselves alone, we frankly confess that from such a point of view we are not tempted by the proposal. It is our serious opinion that the council has far more to gain than we could have by an extension of publicity, and from that conviction we have left the result to work itself out by the natural vigour of the arguments in its favour.

The subject was well discussed on both sides, but the speech of Mr. Betty, once the warmest advocate of a similar proposition, was exceptional for bad taste, bad argument, and quite unnecessary rancour against ourselves. The rich MacMahonism of his remarks will be hardly satisfactory to those who have voted for him. According to him, "persons outside," that is to say, the reptiles and insects who are graciously permitted to be the constituents of the "divine right" councillors, may form what opinions they please, but "why in the name of independence should the council trouble itself" about such people's ideas? Bluster of this kind might be alarming in an emperor, but pharmacy will get through the crisis. It is, however, as well to note it for a future election, for constituents generally like to have at least a show of respect from those who represent them.

THE PROPOSED MEDICAL RECONCILIATION.

The homœopathists will not be robbed of their bone after all. The momentary alarm of getting swallowed up in the great gulf of orthodoxy which lately threatened them has passed away, thanks to the gallant resistance of some of the younger and fiercer of the infinitesimalists. What would have happened if Drs. Wyld and Richardson had succeeded in their amiable efforts to "heal the breach"—if their message of "peace and goodwill," as Dr. Richardson somewhat pompously styled his rather weak effusion, had brought about that reconciliation which they both seemed to think so important? The result would have been a ludicrous collapse for homœopathy, and probably a perpetual irritation to allopathy. If the two or three hundred gentlemen who constitute the homœopathic school were absorbed among the twenty thousand prophets of Baal, and sat down silently with them at the Jezebel table of their common professional associations, what would become of that faith for which they have *selon eux* suffered so much obloquy, and sacrificed their fortunes, their friendships, and their prospects? Homœopathy as such would have been extinct, and in its place there would be a small group of eccentric gentlemen in the various medical societies whose good ideas would soon get assimilated, and whose mere fancies would be perhaps a little more tardily dispersed. Homœopaths who have not yet made a sufficient fortune or reputation were not likely to swallow such a bait.

Dr. Richardson says that he told Dr. Wyld, when the latter first came to him with proposals of peace, that "We who form the main body of physic are not likely to change our views in the slightest degree." This is rather "high falutin," and comes well from the representative of a science which is hardly two days alike. Certainly, those of us whose only desire is to be saved from the hands of medical professors of both sections would rather see a combination of forces to battle with disease than watch the array of these in idle and puerile skirmishing over forms of words and everlastingly unprovable dogmas.

PRESCRIBING AND DISPENSING.

The *Lancet* of June 16 has an article on prescribing and dispensing. The writer shows his utter inability to look at the subject from any but the most narrow and selfish point of view. Recognising the desirability of a sharp separation between the two functions, he urges the Pharmaceutical Society "to assume the control of the trade." The Pharmaceutical Society has in past and recent times assumed a good deal, but it is not likely to take this clear leap into the domain of the ridiculous. The suggestions to the trade which this friendly critic offers as likely to bring about the desired object are, first, that druggists should reduce their tariff; secondly, that they

should dispense with more uniformity and accuracy; thirdly, that they should be more ready to supply medicines outside of "business hours;" and, fourthly, that they should in no wise spoil the opportunity at present enjoyed by the profession of grudging out of poor patients every penny that can be by any means extracted from them. These are the words of the *Lancet*:—

"Unless the retail trade in medicines can be conducted with due regard to the interests of the allied profession, it will remain impossible for general practitioners among the lower middle and necessitous classes to discontinue dispensing. The consideration we are about to urge applies only in a limited degree to physicians' prescriptions; but even in regard to these it has a substantial application. The written directions for a remedy are given with the intent that it shall be used only for the case under treatment and at the time specified. It would be convenient if these formulæ could be dealt with as drafts on a banker, and cancelled when their immediate purpose has been fulfilled. In the case of prescriptions written by general practitioners engaged among the classes which cannot adequately remunerate their professional adviser, the principle ought to be recognised. Under no circumstance is the druggist justified in using the advice given by the practitioner for his own purposes."

The greediness, and we will add the immorality, of the principle advocated in this extract almost overshadow its absurdity. But we should think no one could read it without observing the audacity of the claim that "a remedy shall be used only for the case under treatment and at the time specified." In the same spirit the writer goes on to insist that druggists have "no moral or scientific competence to exercise medical functions." It is of no use for him to pretend that he only touches minor cases; he is incompetent to tell what is a minor case. There is no reply to all this nonsense so appropriate as indifference to it.

COUNTER PRACTICE.

LAST month, in an article on counter practice, we stated that in our opinion chemists had the right pertaining to every human being of giving advice about a sore throat or any other ailment wherever and whenever they should please. A chemist, we claimed, might stand in his shop and give medical advice to any one who comes to ask for it "so long as he makes no pretence whatever of being anything else than a chemist and druggist." "The claim thus set forth," says the *Medical Press*, "we characterise as monstrous, because it asserts the right of all persons to practise medicine without showing any evidence of competency whatever. The medical profession could not for a moment tolerate such a pretension, and we are sure that Parliament would scout it if the issue were put in these exact terms."

The assertions of the *Medical Press* are not judicial decisions, and we shall be greatly astonished if its knowledge of the temper of Parliament proves to be well founded. The English law permits any person, however uneducated, however incompetent, to express his opinions and to give advice on all subjects, political, theological, moral, legal or social, subject only to the restraints of decency. If any section of Her Majesty's subjects are to have their lips closed by legal compulsion on the one subject of medicine, it will be an anomaly for which very urgent reasons will have to be given. After expressing the most absolute confidence in the issue, our contemporary suddenly remembers that the justice of its cause alone may not be sufficient. This is the peroration:—"For the legal campaign money is wanted. The druggists have backed their pretensions with a lavish hand, as it was necessary for them to do, considering that much of the profits of the class who have contributed are made by counter-practice. The profession must do the same, and will need to give the Medical Defence Association its best help in the way of subscriptions. If the matter should go no

further, the chemists will have secured an undoubted victory, and will be able to boast that their position as medical men has been fully recognised."

ACCURACY IN DISPENSING.

DURING the recent discussion on accuracy in dispensing attention was more than once directed to the extremely inaccurate measurement of ordinary medicine bottles. It is well, for several reasons, that this should repeatedly be forced on the attention of dispensers, not so much to prevent them being again caught napping by some too vigilant analyst, as to attain what with a little care and trouble can and should always be secured, namely, perfect accuracy in dispensing. The following results fully justify all that has already been said on the subject, and further demonstrate the urgent necessity of some reform on the part of druggists' sundrymen or other responsible parties. The phials and bottles were all taken from the ordinary stock of a dispensing chemist, and therefore may be fairly accepted as representative of those in general circulation:—

No.	1-oz. phial	2-oz. phial	4-oz. bottle	6-oz. bottle	8-oz. bottle
1	-33	+5	-180	-125	-130
2	-17	+15	-140	-85	-73
3	-7	+25	-30	-85	-50
4	-2	+29	-20	-5	+50
5	+18	+50	-16	+5	+57
6	+22	+91	+44	+10	+60
7	+26	+103	+90	+95	+65
8	+41	+105	+100	+140	+107
9	+43	+107	+100	+145	+157
10	+54	+111	+120	+175	+190
11	+102	+125	+150	+225	+375
12	+106	+155	+152	+305	+480

— Deficiency in grains.

+ Excess in grains.

From the above it will be noticed that the 2-oz. phials are the most accurate, although even they have nothing to boast of, seeing that betwixt the extremes there is a difference of 150 grains, or nearly one-sixth, in capacity. In the case of the 1-oz. phials the difference is 139 grains, or nearly one-third, in capacity, and the variation of 33 per cent., where the plan is adopted in dispensing of simply filling up a bottle without first correctly determining its capacity, affords an admirable field for some enterprising sensationalist.

LAMPLOUGH'S SALINE—A LEGAL POINT.

THE question of the liability of Lamplough's Pyretic has provided for some of Her Majesty's Judges a very enjoyable exercise of intellectual skill. Those readers who will follow in detail our very full report of the judgment in the Court of Exchequer last month will not fail to admire the acuteness, three and ingenuity with which the conflicting conclusions of the judges are supported. There certainly seems sufficient reason for the difference of opinion, though we are not quite able to recognise a satisfactory basis for the ultra confident tone which characterised the decisions both on one side and on the other. The case seems to provide a genuine logical dilemma. It can be stated in two or three sentences. The Act of 1812 enumerates some 600 preparations or classes of preparations liable to stamp duty. These are distinctly specified, and in the list is one line which seems clearly to include Lamplough's Saline. The schedule further renders liable to duty "all other" preparations of a medicinal character, under certain conditions. In 1833 another Act was passed, which specifically repealed that one line in the former Act which covered Lamplough's Saline. Accordingly, Lamplough's Saline would have been liable to the medicine tax between 1812 and 1833, but exempted therefrom afterwards. But, say Barons Huddleston and Cleasby, the effect

of the repeal of a clause is to leave the Act just as if the clause repealed had never been in it. In such case they have, as it appears to us, good ground for including "Lamplough's Saline" in the "all other" medicines referred to in the tail of the schedule. The Lord Chief Baron, however, argues with not less force the other way. He says, if Lamplough's Saline was included among the artificial waters, &c., in the Act of 1812 (and we think he clearly shows it was), it was necessarily excluded then and for ever from the "all other" preparations of the tail of the schedule. He is confident it would have been taxed previously to 1833 under the section referred to; if so, when the section was repealed, surely the articles it included were free. The point is a fascinating one for argument, though it does seem a little hard that Mr. Lamplough should have to provide all this entertainment at his own expense.

THE REGISTRATION OF TRADE MARKS.

ON July 1 the provisions of the Act for the Registration of Trade Marks came into full force, except only as regards marks for textile fabrics, for which the time for registration is to be extended until next January, on account of the vast number of private applications, which it is said have reached 40,000, and which are dealt with by a committee of experts.

The number of trade marks which have already been notified in the *Official Journal* is 9,779. The applications in respect of these marks have been made by 3,448 claimants. Between 4,000 and 5,000 marks have been placed upon the register. As to most of the remainder, the statutory interval of three months between advertising and registration has not expired.

There is some doubt existing as to the position of persons with trade marks which have not been registered. A person with a trade mark before August 14, 1876, has only to apply for registration, and, if refused, obtain from the Registrar a "certificate of refusal," and he is in a perfectly sound legal position. But a new trade mark—that is, one adopted since August 14, 1876—may be refused for various reasons. In that case, and also during the period which must elapse between application and completion of the registration, what is the position of the owner? One might judge from the Act that anyone may infringe his mark who pleases. The editor of *Trade Marks* considers that the Merchandise Marks Act provides protection. If so, one naturally asks why was the Trade Marks Registration Act passed at all? The answer is, we suppose, that it will simplify proceedings, and anyhow, as it is passed, it is as well to point out that owners of trade marks of sufficient importance to be protected will be in an extremely bad legal position if they do not at least make application for registration.

PARIS ÉCOLE DE PHARMACIE.

THE new buildings for the French Superior School of Pharmacy which are now being constructed in Paris will be on a grand scale. They are being erected upon some vacant ground near the Palace and Gardens of the Luxembourg, within the territory which is usually denominated the Latin Quarter, and over a portion of the Old Catacombs. The magnitude of the new premises may be inferred when we give the superficial surface to be occupied as being over 50,000 square feet, or nearly half of that occupied by the magnificent Place de la Concorde, in Paris. In the centre of the pile of buildings there will be a grand courtyard, with the statues of Parmentier and De Vanquelin. On either side of the principal edifice will be two spacious pavilions for the laboratories. The central structure will contain several amphitheatres, two of which will be of a

size of 1,200 square feet, each seated for 600 students. In the rear of the buildings will be installed the gardens and hot-houses, and behind these there will be a large building in which 600 students will have space for laboratory manipulation. In the construction of the foundation of these buildings over 300 wells have been pierced into the Catacombs for the purpose of constructing the foundations. These works, which are carried out at the Government expense, will cost several millions of francs, and are expected to be completed in 1880.

CHLORAL HYDRATE.

THE subject of chloral hydrate is now engaging much attention. The Council of the Pharmaceutical Society are debating whether it shall be scheduled as a poison. The new Pharmaceutical Society of Nova Scotia has already placed it in the poison list. The public are beginning to regard it with a superstitious horror bred of ignorance. Even the doctors are becoming reluctant to use it. But the recent article by Dr. Liebreich, which we abstracted last month, does much to explain the doubt and mistrust with which it is regarded. It will be remembered that Dr. Liebreich announces that cake chloral is totally unreliable, as it frequently contains bodies which neutralise its physiological action. Some varieties even of crystallised chloral cannot be depended on. With these facts before them it will not need the terrors of the Sale of Food and Drugs Act to make chemists and druggists feel the importance of this matter. For the sake of the public and of the doctors, but most of all for their own, they must obtain a pure article. From Dr. Liebreich's paper it will be seen that druggists are much at the mercy of the makers in this respect. It is true that all chemists are able to distinguish between needle-shaped and rhomboidal crystals, but we fear that even this is hardly a sufficient test of purity. The means of testing it chemically are out of the reach of chemists and druggists, and even a public analyst would have difficulty in detecting this subtle and injurious contamination. We are afraid, too, that few wholesale houses would be willing to guarantee the purity of their product in this respect. There is no doubt that such a guarantee would be the best safeguard all concerned. It would be a general benefit if some firm of recognised position would make a special study of chloral and would warrant the purity of its products.

RETAIL TRADE.

WHILE there can be no doubt at all about the serious diminution of our foreign trade, the evidence of which is too prominent—quite apart from the official record of exports—it is not so clear that trade at home, taken as a whole, is by any means in an unhealthy condition. It is true that in all quarters we hear the stereotyped expressions about bad times, and knowing, as we do, the sympathetic connection which binds together all classes of the community, we could not be surprised if the falling off in the amount of production and the consequent lack of work to men and sacrifice of profit to masters should tell on the returns of every person engaged in the labour of distributing goods. This seems what we might reasonably expect. How, then, shall we account for the steady and really remarkable increase in the value of our imports, as indicated in the official returns from month to month. The estimated value of these for the first five months of this year were over 165 millions, or 9 millions more than in the same period of 1876, which was itself 5 millions in advance of the corresponding months of 1875. The smaller amount of exports leaves a still greater difference than that shown to be accounted for by home consumption. Thus, it is obvious that the retail traders of this country, through whom mainly these imports reach the con-

sumer, must have made a considerably larger turnover this year than last, and with the original cost of most goods so much lower, and retail prices not generally fallen in proportion, it would seem as if they should have not only done more trade, but also made larger profits. We hope our calculation is well founded; anyway there is good ground for assuming that a country is not going to ruin when its imports are advancing and its debt is diminishing. England is the only country in the world which can stand a perpetual and enormous balance of trade against herself. During the five months on which we have commented our exports were a little less than 80 millions in value; while we bought in the same period more than 165 millions worth of goods. We owe our ability to keep up that apparently ruinous system of housekeeping to the enterprise and skill of our English race on every shore and in every clime.

THE TRIAL OF THE PYX.

On July 4 the annual trial of the pyx was held at the Goldsmith's Hall. The pyx is a box kept at the Royal Mint, in which the deputy-master is bound to deposit one coin out of every 15 lbs. of gold and 60 lbs. of silver coined by him. This year the pyx contained 900 sovereigns, 682 half-crowns, 460 florins, 1,019 shillings, 391 sixpences, 2 fourpences, 110 threepences, 2 twopences, and 6 penny pieces. The object of the trial of the pyx is to assure the country that the coin in circulation is in every way up to the standard. The trial consists of several stages. The jurors are first sworn by a special form of oath. The coins are brought in parcels by the Mint officers, and the number is checked by the jury. As many coins as are judged necessary are taken from each parcel, weighed, melted to an ingot, assayed, and compared with the "trial plates" in the custody of the Board of Trade. The next step is to weigh the remainder of the coins in bulk. As many coins as the jurors think fit are then taken therefrom, and each coin is separately assayed. The facts and results thus obtained are recorded in a verdict signed by the jury and the Queen's Remembrancer.

Two sovereigns taken as specimens differed from each other by only .03 grains, and varied from the standard by .5 and .8 grains respectively, while the degree of fineness varied from the standard by only .36 per mille. The trial of two half-sovereigns showed an even closer approximation to the standard.

For the purpose of making this trial the following officers were summoned to attend from the various public departments interested in the proceedings, viz., the Queen's Remembrancer, Sir Frederick Pollock as President, the Deputy-Master of the Mint, the Hon. C. W. Fremantle, the Secretary of the Board of Trade, Mr. Thomas Henry Farrer, and the clerk of the Goldsmiths' Company, Mr. Walter Prideaux. Twelve gentlemen, freemen of the Goldsmiths' Company, were summoned as jurors.

Their report was delivered to the President at 6.30 P.M. of the same day, and was afterwards published in the *London Gazette*.

AN OPPOSITION BANKRUPTCY BILL.

THE Associated Chambers of Commerce of the United Kingdom, not quite contented with the Lord Chancellor's Bankruptcy Bill, have drawn up an opposition one of their own. The difference between the two bills may be roughly stated thus:—That the Government bill would reverse the principle of our present bankruptcy laws, according to which creditors are reckoned to be themselves the most fit and proper persons to

conduct the winding up of an insolvent estate. The Government thinks, with exceeding good reason, that this principle, so admirable in theory, has completely broken down in practice, and would, therefore, have bankrupts' estates much more closely regulated by the blind machinery of the Court. We confess that in our view the Government has by far the best of the argument. The opposition bill merely aims to amend the weak points of the Act of 1869. We believe nothing but a thorough reform, worked by authority, will clear away the rubbish which has accumulated by reason of our commercial laxity. Among the modifications proposed by the Associated Chambers are provisions that 20s. instead of 50s. shall be sufficient to constitute a petitioning creditor's debt; that a bankruptcy or liquidation petition shall *ipso facto* restrain actions, and that a bill of sale shall be void if not registered before an Act of Bankruptcy. There is good reason for these alterations, but what is most wanted at the present moment, we fear, is a vigorous resolution to make an alteration at all.



ANOTHER PROSECUTION FOR COUNTER PRACTICE.

APOTHECARIES' COMPANY v. HARRISON.

This case was heard at the Birmingham County Court, before Mr. James Mottram, Q.C., Judge, on Monday and Tuesday, July 2 and 3. The plaintiffs were the Society of Apothecaries, London, and the defendant, James Harrison was chemist and druggist, of 73 Stafford Street, Birmingham.

Mr. Nathan (instructed by Mr. W. J. Reeves) appeared in support of the case, and Mr. Jesse Herbert (instructed by Mr. Glaisyer) defended on behalf of the Chemists' and Druggists' Trade Association.

In opening the case, Mr. Nathan explained that the action was brought under the 20th section of the 194th chapter George III., entitled "An Act for better regulating the practice of apothecaries throughout England and Wales." The section provided "That if any person (except such as are then actually practising as such) shall after the said first day of August, 1815, act or practise as an apothecary in any part of England or Wales without having obtained such certificate as aforesaid, every person so offending shall for every such offence forfeit and pay the sum of twenty pounds." The action was now brought to recover the penalty named. He said it might be possible, if the Apothecaries' Company strained their powers, to bring an action against a chemist every time he gave a man over the counter a cooling draught, or suggested a pill for stomachache. But if the respectable body he represented were to be guilty of such folly, public opinion would step in. These actions were always a matter of great consideration, involving many inquiries and much correspondence before the company would allow their name to be used in any way whatever in connection with the same. Any person who had a knowledge of the facts connected with the previous actions could not help admitting that the discretion of the society had been well exercised. It was perfectly clear that if a man practised as an apothecary he was liable to the penalty, the "practising" being professing to be a judge of internal complaints by external symptoms, and applying himself to their cure by medicine. If that was established in the present case, it would be sufficient for the penalty. After detailing the evidence he purposed adducing, the learned counsel called:—

JULIA CADDICK, who gave the following evidence:—

Do you know Stafford Street, Birmingham?—Yes.

You know Mr. Harrison?—Yes, sir.

Did you go to his shop last November?—Yes, the 27th.

What did you tell him?—I asked if he could make me up something for a weakness left on me.

His Honour: What did he say?—He asked me what the weakness was from.

His Honour: Well?—And I told him.

His Honour: What did you state?—I said it was weakness left on me from my confinement.

His Honour: Did he do anything; did he feel your pulse or look at your tongue?—Yes, sir.

His Honour: What did he do?—He looked at me.

His Honour: Will you be good enough to tell me all he said and did?

Mr. NATHAN: Did you explain?—I told him, sir, and he gave me medicine.

What did you tell him?—I told him the womb came down.

Came down; did you describe anything else to him; did you tell him what you felt?—Yes.

His Honour: Did he inquire?—Yes; I said I was very weak, and he said the medicine would do me good.

His Honour: Will you begin from the time you went into the shop, and tell me all you said and what he said, and what he did with reference to this matter?—I went to Mr. Harrison, and asked him if he could give me something for a weakness, and he said "What weakness," and I explained, and he gave me a bottle of medicine.

His Honour: Did he examine you?—No.

His Honour: Did he feel your pulse?—Yes; I think he did.

His Honour: I do not mean a particular examination. Did he look at your tongue or feel your pulse?—Yes, sir; he did feel my pulse.

Mr. NATHAN: Did he look at your tongue?—No.

Did he ask you anything about how you felt or what you felt?—Yes; I told him I suffered very much from my back.

His Honour: "From my back?"—Yes, and he gave me the medicine and said he thought it might do me good.

His Honour: Did he say he knew what it was?—He said the medicine would do me good, and I was to take it by the instructions on the bottle.

Mr. NATHAN: Did you take some of it?—Yes, sir.

Did you pay him?—Yes, a shilling.

Afterwards, in April last, when the summons was served, did he come to see you?—Yes, sir.

Did he ask you to let him look at the bottle?—Yes, he came on April 7, and asked to look at the bottle. He said, "Is your name Goodwin?"

His Honour: Never mind about that.

He said, did I remember going to Adcock's for a bottle of medicine, and I said no. Then he said it was a very bad case for him to be fined 20*l*. for selling a bottle of medicine.

His Honour: you said you did not remember going to "Adcock's?"—No; for a minute, I did not remember where I had been.

Mr. NATHAN: Was he the same man you saw at the shop?—Yes. Mr. Harrison looked on the table at the baby's bottle, and asked for the bottle, and I said I did not know where it was.

Did he ask about the medicine, and whether it had done you any good?—I said I had taken some of it.

Did he ask whether it had done you any good?—Yes; I told him I had taken some, and that I did not know whether it had done me any good, or if I had taken enough of it. I know I must take more than a bottle.

His Honour: Is that what you said?—Yes; and he came again on the 9th.

Mr. NATHAN: What was that for?—He said that he had mentioned his case to a gentleman friend, who would not believe him till he opened the case to him, and he wished to see me.

You would not go?—No; I said I would not, on account of the baby's sickness.

Did he come again?—Yes, on April 16, and brought a cloak and wanted to fetch a cab to take me to his solicitor; but I would not go.

His Honour: Wanted to fetch a cab and take you to his solicitor?—Yes; but I would not go. I said all I could say was that I had the medicine.

By His Honour: I told him it was no use my going as I could only say I had the medicine. He asked me whether it was him or his assistant, and I said, "Of course, it was you, Mr. Harrison, who served me."

Mr. NATHAN: You were very unwell, I believe, when you went there?—Yes, sir.

Besides what you have said, were you very pale and weak?—Yes, he asked me if I had mentioned it to Mr. Jones, and I said I had not.

Had you any conversation with him when you first went to him about what you were suffering from—what you felt?—No more than I told you.

Mr. HERBERT (cross-examining): You remember these circumstances, though they occurred last November?—Yes.

All that took place when he came to your house?—Yes.

Did you say you could not go because you had not the clothes?—Well, I had not the clothes, but I said the sickness of the baby.

Then why did he bring a cloak the second time?—I know I said I could not go then.

Did you say you could not go because you had not the clothes to go in?—I said I could not go then.

Did you say you did not know the name of the shop you went to?—No; at the first time I did not remember the shop, but I told him the second time. I did not know him for a minute when he first came in, but I knew him after.

But did you tell him that you did not know which shop it was?—No; I said it was a little shop below Adcock's.

You did not say it was "Adcock's?"—No; because I knew it was not.

Where do you live?—In Allison Street.

How far is that from Stafford Street?—Not far.

Half-an-hour's walk?—No; it would not take me that long.

Had you been to Harrison's shop before?—Not for myself, I had not.

Have you been there at all?—I have been before, I know.

What made you go that day?—Because I was told he might do me good.

Who told you?—Mr. Goodwin.

Who is Mr. Goodwin?—The master of the house I live in.

Did you know why he wanted the bottle?—I did not.

Do you know whether he is going to give evidence?

Mr. NATHAN: She does not know, I know.

Mr. HERBERT: Why did you go to Mr. Harrison?—I would go anywhere I thought would do me good.

Was it not his assistant you saw?—No. I saw Mr. Harrison himself.

Did you not tell Mr. Harrison it was his assistant you saw?—No, I did not.

Did not you say you did not know which it was?—I said, "It was you, Mr. Harrison."

Oh! you knew Mr. Harrison when he first came in?—No, not for the minute, but I did when he sat down.

Did you not tell him you had never seen him before?—He said he did not remember serving me, and I said, "Yes it was you, Mr. Harrison."

How long were you in the shop with him?—I know I was not there long.

Were you there three minutes?—Of course I was.

Were you there five?—I dare say I was there quite that long.

When was the first time you saw Harrison?—November 27 was the first time I could remember seeing him.

Where was the bottle when he came the second time and you said you had given it to Mr. Goodwin?—I had given it to Mr. Goodwin.

Then you were sent by Mr. Goodwin to get it?—I was told it might do me good.

How was it you did not drink it all. After you had drunk a certain portion you gave it to Mr. Goodwin?—Yes.

You said you had not taken enough to do you good, because you knew you must take more than a bottle?—I did not take any more because it seemed to get me in pain.

Were you not sent for it on purpose to hand it over to Mr. Goodwin?—No; I went because I wanted it to do me good.

How old was the baby then?—Between two and three months.

Did he write you any prescription?—No; he made it up himself.

His Honour: I wish you would let me hear.—I said he did not write me any prescription.

I suppose he casually felt your pulse, and said "very slow," or "fast?"—He said he could make me a mixture that would do me good.

His Honour: Felt your pulse, and said he could make a medicine that would do you good?—Yes, sir.

Did you say your womb had come down?—Yes.

CHARLES RADFORD SUFFIELD, M.D. and F.R.C.S., upon being sworn, was examined by Mr. Nathan as follows:—

Were you present in Court when the last witness was examined?—Yes, sir.

And you have heard her give her evidence?—Yes.

From the description she has given of what she suffered and what she told Mr. Harrison at the time, what was she suffering from?—I should imagine that she was suffering from a disease called anemia—deficiency of blood, or of the red particles of blood.

Is it an internal complaint—constitutional?—Yes.

And a dangerous one?—Yes, unless treated properly.

I believe it may arise from a great number of causes?—Yes.

And common to both sexes?—Yes.

His HONOUR: Not so common to man as to woman?—No.

Is it in your opinion a constitutional complaint?—Yes.

In diagnosing a complaint of that nature, would such an account as you have heard from the woman have been sufficient?—No, we might go a little deeper into particulars.

A good deal would depend upon complexion, pulse, &c.; the appearance of the pulse is one of the symptoms from which you diagnose?—Yes.

Do you ever form a diagnosis from it alone?—No.

You do not consider it sufficient?—No.

Mr. HERBERT: You would not consider it sufficient?—No.

Mr. HERBERT: In the early stages it is not very dangerous, is it?—No.

Have you examined that mixture?—No. I have looked at it, and I imagine it is a preparation of iron, which would be a proper medicine.

I believe this disease is an uncommon one?—No, by no means: it is a disease of poverty, if you like.

Is it a very common disease?—No, not a very common disease.

But I believe thousands have suffered from it?—Yes; the world is very large.

His HONOUR: And it has existed a long time.

Mr. HERBERT: It is not an uncommon disease?—Certainly not.

Mr. NATHAN remarked that the above was the evidence for the plaintiffs.

Mr. HERBERT submitted that the case had not been proved. He contended that according to the Act any person practising as an apothecary before 1815 may so practise now. It was for the prosecution to prove that the defendant was not in the business at the time the Act was passed.

His HONOUR: What do you say to that, Mr. Nathan?

Mr. NATHAN: I say it lies on the defendant to prove that he was. It is impossible to prove a universal negative. The affirmative lies on him who affirms.

His HONOUR: You affirm as a fact that he was not an apothecary before 1815. You allege that he was not an apothecary before 1815.

Mr. NATHAN: Then I say the onus does not lie on me: it is a negative, and no man is bound to prove a negative.

His HONOUR: I find the case has been tried twice in your favour, Mr. Nathan, and against you, Mr. Herbert. It would be for you, Mr. Herbert, to prove that he was practising previous to 1815. Feeling sure that no injustice will be done to the defendant, I shall hold that inasmuch as the affirmative is with you, Mr. Herbert, and within your own knowledge, it is for you to establish, and not for Mr. Nathan to prove a negative. If there is the slightest doubt about it I will adjourn the case until tomorrow morning. It is a matter which may be proved by subpoenaing the witness.

Mr. HERBERT: In order that the case may go on, I will admit as a fact that the defendant was not in practice prior to 1815. I am instructed by Mr. Glaisyer, the solicitor of the Chemists' and Druggists' Trade Association, to appear on behalf of the defendant. The defence is a very simple one, and it would be necessary that I should argue it at some length. There have been many actions brought against unqualified men, but not against qualified chemists and druggists. The real question is whether chemists and druggists may recommend their wares over their counter to persons coming to buy. The point is a new one, and knowing that a case has gone up to the Court of Exchequer, knowing that it was a question whether properly qualified chemists and druggists could really recommend their drugs and medicines, and in the face of a special request for delay until the case had been decided, the Apothecaries' Company have pushed forward this action, and pressed for

the penalty, when no possible good can result from it. The action cannot possibly serve any purpose; because, if your Honour is against me, it will be necessary to appeal to a higher Court to have the point decided, as in the previous case. After quoting various sections of the Act, the learned counsel submitted that chemists were legally entitled to conduct their business in the manner adopted prior to 1815, and that, as he should prove by a witness who had been in the trade since 1809—six years before the passing of the Act—such a procedure as that alleged to have been taken by the defendant for the recommending of drugs or medicines upon an expression of certain symptoms was the custom before 1815. But now, after a lapse of sixty years, there was a sudden outburst of feeling, it being probably thought by the company that all witnesses who could prove the custom prior to 1815 had become decrepid or died out. The 28th section provided "That nothing in this Act shall extend or be construed to extend to prejudice or in any way to affect the trade or business of a chemist and druggist in the buying, preparing, compounding, dispensing, and vending drugs, medicines, and medicinal compounds, wholesale and retail." It was therefore perfectly clear that chemists properly qualified might furnish and supply medicine; and he submitted there was no evidence to show that the defendant had either attended or advised in the present case.

His HONOUR: Do you mean to say any person may go to a chemist and say, "I am suffering from some disease or other, but I do not know what it is. I have not been well for a month, and am getting worse," and the chemist prescribe for him?

Mr. HERBERT: In simple, minor ailments.

His HONOUR: You admit no chemist can attend at a patient's house and supply medicine?

Mr. HERBERT: Yes.

His HONOUR: But you say he may prescribe.

Mr. HERBERT: I do not like the word prescribe.

His HONOUR said that in his opinion a man might go to a chemist and say, "I have got a toothache, or I have got a headache; will you give me, say, some sal volatile, for the headache and some tincture for the tooth." His Honour had not the slightest doubt that a chemist might sell what was required, but whether he might take the ordinary means of finding out the headache or toothache, and prescribe medicines for the disease which he himself had found out, was quite another matter. He ventured to put it that if a man went to a chemist's shop and said he was suffering from some disease, the nature of which he did not know, and the chemist took the ordinary means of feeling his pulse and examining him, and then said "I know what is the matter with you," and supplied him with some medicine, he would be infringing the Act.

Mr. HERBERT: I might consult with one of my friends, and say, "I think a little quinine would do you good; go to Southall Bros., and get it there." If I may say that, why may not a chemist say it?

His HONOUR: You have no interest in the sale of quinine. You may, as a friend, offer advice; but gratuitous advice is seldom worth receiving. It was lest a man, not being qualified, should give a wrong medicine that the Act was passed.

Mr. HERBERT: But defendant is qualified, and the Act was never intended to apply to properly qualified chemists and druggists. The woman goes to the defendant, and says, "I am weak; my womb is down owing to weakness left in my confinement," and Dr. Suffield says the medicine given to the defendant is the right stuff.

His HONOUR: Dr. Suffield said it was probably a preparation of iron, and if so it would be a proper medicine. Did Mr. Herbert think that, supposing his client was properly qualified, such a man would have prescribed medicine which might have had serious effects without inquiries as to the particular state of that woman when she herself said she was suffering from weakness? In my opinion there is no difficulty in the law, but in applying it. If there is "prescribing," the chemist infringes the Act, but if there is no "prescribing" he does not do so. If he sells his medicine simply because he is asked for the same, I think there is no infringement.

Mr. HERBERT: He writes no prescription, and simply on the statement of the woman he makes a medicine and gives it her. A simple charge of one shilling was paid for the medicine. The same amount as would have been required had the woman sent for the bottle instead of going for it herself. If the Act touched Mr. Harrison it should touch Mr. Goodwin, for, on his advice, the woman fetched the medicine.

HIS HONOUR: If you can put Mr. Goodwin on a level with the chemists and druggists, for the Act says they shall not prescribe.

Mr. HERBERT proceeded to argue that defendant had acted in accordance with the custom prior to the passing of the Act, and, the learned counsel contended, he had a perfect right to do. Not allowing chemists and druggists to give advice would almost prevent the poor getting advice.

JAMES HARRISON, the defendant, examined by **Mr. Herbert**, replied as follows:—

Are you a registered chemist and druggist?—I am.

Do you carry on business in Stafford Street as a chemist and druggist?—I do.

Will you look at that register of chemists and druggists?—I have not my glasses.

Your name appears in it, does it not?—Yes, sir.

How long have you been a chemist and druggist?—Thirty years.

During that time have you ever been charged with prescribing?

Mr. NATHAN: That is not fair.

Do you remember Julia Caddick visiting your shop last November?—Yes, sir.

I believe it was in the afternoon?—Yes, it was.

What then took place?—She came to me and asked for a bottle of strengthening medicine, which I supplied her, for a weakness.

Did you examine her at all?—No; it was not necessary.

Did you feel her pulse?—Certainly not.

Did she say anything about her womb?—No, nothing whatever.

Have you told us all the conversation that took place between you?—She asked me for a bottle of medicine for a weakness, and I said, "Is it in connection with your lying-in you mean," and she said "No." Seeing that she had been recently confined, I asked her that.

HIS HONOUR: You asked her if the weakness had anything to do with her confinement?—Yes, sir.

HIS HONOUR: Do you say she had been recently confined?—She had a baby in her arms, which was a proof of it. I asked her if it was hers, and she said "Yes." I said, "What kind of weakness is it?" and she said, "I mean weakness of the body."

HIS HONOUR: That does not come in very well.—Yes, she said "I mean weakness of the body."

Mr. HERBERT: What did you say in reply to that?—I said, "Do you mean general weakness of your constitution?" and she said "Yes."

What was done then?—I then mixed up some stuff.

Will you look at that: is that the stuff?—No; I never sold such rubbish out of my shop. I never sold such rubbish in my life.

What kind of weakness was she suffering from?—You might call it anæmia.

Mr. NATHAN: How did you know what kind of medicine to supply her with. Did you take it at random?—I supplied it in the ordinary way that chemists and druggists do.

You saw the woman and judged that she was suffering from debility and anæmia?—Yes.

How did you know which of the tonics to prescribe?—From instinct.

Mr. NATHAN: What did you give her?—To the best of my belief tincture of iron with quinine.

When you were served with this summons you went to see Mrs. Caddick?—I did.

Did you ask whether she recollected fetching a bottle of medicine from Mr. Adcock's?—No, I did not.

You went to the woman when you were served with the summons?—Yes. I said to her, "Do you know me?" and she said "No," and I said, "Did you ever go to a chemist and druggist's for any medicine?" and she said "Yes," and I said, "Where did you go to?" and she said, "I went to a shop in Stafford Street." Then I said, "If you went to a shop in Stafford Street, and it was not me, was it Adcock's?" and she said, "Yes, it was, and I wrote it down."

Did you say, "I do not recollect serving you?"—No.

Yon did recollect her perfectly, did you?—Yes, I did.

Did you ask her whether she was sure it was you or your assistant?—Yes, I did.

And you did not feel her pulse?—No.

Why did you go to the woman?—I went to her and wanted her to go to a solicitor's office and say what she thought proper. I wanted her to state what she said to me.

In selecting this medicine you selected it by instinct?—Well, I gave it her from many others.

Mr. HERBERT: You gave a common remedy?—Yes.

HIS HONOUR: She did not tell you she was suffering from anæmia?—She told me she was suffering from weakness, and I gave her some medicine, but not that rubbish.

THOMAS PARSONS stated that he was 84 years of age. He served his apprenticeship to a firm of chemists and druggists, and had remained in the trade till about 12 or 14 years ago.

Mr. HERBERT: If a person, prior to 1815, came to the shop and described her symptoms, did you give her medicine for the complaint?—I was accustomed to give medicine as well as advice.

Did you give advice?—Yes; in an important or serious case the head assistant or one of the principals attended to it.

In simple cases you prescribed?—Occasionally.

And in more difficult cases one of the principals?—Yes.

Was that the custom of the trade at that time?—Yes.

Do you know whether it was done in other shops?—It was.

HIS HONOUR remarked that according to defendant's own admission he took the woman's word for what was the matter. If a chemist would take the simple word of a patient for what was the matter with her, and, without making any examination, supply medicine, it was almost impossible to conceive how important it was that the Act should be properly observed. In the present case there was a chemist and druggist of thirty years' standing simply taking the statement of his patient's case, and, without feeling her pulse, supplying medicine, as he said, by instinct.

At this stage the case was adjourned until Tuesday morning, when **JAMES HARRISON**, the defendant, was recalled by **Mr. Herbert**:—

How much did you charge for the medicine?—For the medicine I supplied I charged one shilling.

One shilling?—Yes.

Did you charge anything for consultation?—No.

Was it or was it not the value of the medicine alone.

HIS HONOUR: No one says it was not.

Mr. HERBERT: I want it to be particularly on your notes that nothing was charged for advice.

HIS HONOUR: The reverse is not on my notes; therefore I shall take it there was not. If you mean that one shilling was charged for the medicine, and nothing charged for advice, I have that fully. Whether the medicine which was sold was the consequence of the prescribing is quite another thing. There is no doubt at all he charges nothing in that sense. He does not say, "So much for your visit to me," nor "So much for the advice given you." The witness being asked what was in the bottle, **HIS HONOUR** remarked that it was a pity the question had been raised. Defendant, he said, had denied on the previous day that the bottle of medicine produced was the one he supplied. He considered that a serious imputation upon the plaintiffs, and one that ought to be withdrawn.

Mr. HERBERT withdrew the alleged imputation, and the witness proceeded to describe what the mixture supplied was composed of, evidence which **HIS HONOUR** held to be utterly irrelevant to the question at issue.

JULIA CADDICK, recalled, replied in answer to **Mr. Nathan** that in mixing the medicine defendant weighed something in the scale and poured something from a bottle.

The bottle given to you, you say, you gave to **Mr. Goodwin**. Did you take any of it?—I took some two draughts.

How long was it before you gave the bottle to **Mr. Goodwin**?—I took one draught the day I had it, and one the next day, and then gave it to him.

Did you put anything into it, or alter it in any way?—No, I did not.

Did **Goodwin** ask you for the bottle?—Yes.

And what did you say?—I told him it did not agree with me, and gave it to him.

HIS HONOUR: Who is **Mr. Goodwin**?

Mr. NATHAN: I am going to call him.

WILLIAM HENRY GOODWIN, examined by **Mr. Nathan**, returned the following answers to the following questions:—

What are you?—A commercial porter.

In whose service?—Different gentlemen engage me.

Where do you live?—20 Allison Street.

Did **Julia Caddick** live with you in November last?—Yes, she did.

How long have you lived there?—Twelve years.

How long has **Julia Caddick**?—About three years.

You remember when she gave you the bottle of medicine?—I received the bottle on the 28th, which she brought on the 27th.

How long did you keep it in your possession?—One night, sir.

On the 28th did you take it to Mr. Reeves?—Yes, sir.

Did you put anything in it, or alter it in any way?—No.

I suppose you had been told by Mr. Reeves to get it?—Instructed by Mr. Reeves.

Instructed to do what?—To procure the bottle.

His Honour: How did he know you had it?—I was engaged by Mr. Reeves to send for it.

And you sent Julia Caddick to Mr. Harrison's?—Yes.

Mr. HERBERT: She being very weak?—Yes, and ill.

Three months after her child was born?—Yes.

Suffering after a confinement?—Yes.

You simply told her to go and get it, to say she was weak, and you to take it to Mr. Reeves?—I did not tell her that.

Is Julia Caddick living with you as your wife?—I expect to make her my wife.

And in that capacity you sent her for the medicine?—Yes, she not knowing what my intonation was.

Then you are the informer in this?—I received instructions from Mr. Reeves to do it.

To get up the case?—To do what I did.

This was the whole of the evidence, and, at the invitation of His Honour, Mr. Herbert again addressed the Court.

The learned counsel contended that the defendant had in no way infringed the Act, and the chemist had a right to consult with his customer and supply what was best for her. Surely the defendant might suggest to her, persuade her to take (in the sense of buying), or dissuade her from buying. Such consultation was part of the sale.

His Honour: That is contrary to the opinion of Baron Bramwell. His lordship stated that if a person entered a chemist's shop and asked for something to cure the headache, and the chemist gave him some medicine, he would be technically infringing the terms of the Act, although it would be very unreasonable for the society to interfere in such a case. I am not prepared, however, to adopt in its entirety the view of the learned Baron. I draw the line, and say, if a person goes to a chemist, suffering under a disease, the nature of which he does not know, but believes the chemist does, and the chemist takes the ordinary means of ascertaining what that disease is, and then prescribes medicine to cure the disease which by examination in any way you like is found out, he steps beyond his province as a chemist and adopts that of a medical man. I should be very wrong, indeed, however, in saying that such a learned judge as Baron Bramwell is not right: nevertheless, my own view is that it is too strict an interpretation of the Act. If Mr. Herbert contends that a chemist is entitled to prescribe, I should like to know the object in passing the Act.

Mr. HERBERT: To prevent unqualified persons from practising. On the face of the 28th section it is shown that a chemist is qualified for something.

His Honour: No doubt that Act proceeds upon the assumption that only those who had received a proper education, and had passed the Apothecaries' Company, were persons who ought to treat diseases. If you are right, Mr. Herbert, in supposing that a chemist could do so before, after the Act was passed so doing would be an infringement.

Mr. HERBERT: Apothecaries might attend patients at their residences, and chemists at their own shops might prescribe in minor cases.

His Honour: What authority is there for saying that the chemist might prescribe for minor ailments, and where would you draw the line?

Mr. HERBERT: By exercising discretion, as we did prior to 1815.

His Honour: The section to which reference has been made provides against interference with the trade of a chemist in buying, preparing, compounding, dispensing, and vending medicines: nothing is said about prescribing. It appears a very good Act, and ought not to be infringed. I did not think the Apothecaries' Company intended to interfere in trifling cases, and I am not of opinion that if a chemist gave a man something for the toothache or headache he would be infringing the Act. I think they should take it for granted that the company have grounds for taking these proceedings in the interest of the public, for whose real benefit the Act was passed.

Mr. NATHAN remarked that as long as chemists confined

themselves to the buying, preparing, compounding, dispensing, and vending of drugs they would not be open to any interference. All cases, he said, were taken up by the society after careful consideration.

His Honour: Do I understand you to say there is an appeal now pending relative to a similar case?

Mr. HERBERT: There is.

His Honour: On this very point?

Mr. HERBERT: Yes.

His Honour: Then probably you will wish that no judgment shall be given until that appeal is decided?

Mr. HERBERT: That is what we should like.

His Honour: Then I shall not give judgment in this case until that appeal is decided, unless the defendant applies himself for judgment. Mr. Nathan will, however, have a right to ask for judgment supposing the appeal is not prosecuted with due diligence.

LAMPLOUGH'S PYRETIC SALINE.

At the Court of Exchequer, before the Lord Chief Baron, Mr. Baron Cleasby, and Mr. Baron Huddleston, sitting in Banco, on June 18, this case, in which judgment had been reserved, was decided. The facts relating to the case are fully stated in the remarks made by the members of the Court.

Mr. BARON HUDDLESTON: This was a case tried before my brother Cleasby, when, upon the facts stated, a verdict was entered for the Crown. Mr. Hirschell subsequently moved to set aside that verdict, pursuant to leave reserved, and to enter the verdict for the defendant. The question was, whether, with reference to the statutes of 52 George III., cap. 150, and the 3 and 4 William IV., cap. 97, sec. 20, an article called Lamplough's Pyretic Saline was liable to the duty imposed by the statute. Now, the statute of 52 George III., cap. 150, imposed in the first section certain duties upon articles which are mentioned in the schedule to that Act. There was a list of articles alphabetically arranged, extending over eleven columns of printed matter, with a general clause at the end; and that schedule seemed to embrace a great variety of what are called nostrums, or quack medicines, a great variety of different articles called waters; some lozenges, tooth powders, plasters, pills, liniments, and a variety of other things. In its alphabetical order we find "waters, videlicet, all artificial mineral waters, and all waters impregnated with soda or mineral alkali, or with carbonic acid gas, and all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters." At the end of the alphabetical list, after the letter "Z" had been exhausted, and "Zimmerman's Stimulating Fluid" had been put in, there was a general clause at the tail including "all other pills, powders, lozenges, tinctures, potions, cordials, electuaries, plasters, unguents, salves, ointments, drops, lotions, oils, spirits, medicated herbs and waters, chemical and officinal preparations whatsoever to be used or applied, externally or internally, as medicines or medicaments for the prevention, cure, or relief of any disorder or complaint incident to or in anywise affecting the human body, made, prepared, uttered, vended, or exposed to sale by any person or persons whatsoever, wherein the person making, preparing, uttering, vending, or exposing to sale the same hath, or claims to have, any occult secret or art for the making or preparing the same, or hath, or claims to have, an exclusive right or title to the making or preparing the same, or which have at any time heretofore been, now are, or shall hereafter be prepared, uttered, vended, or exposed to sale under the authority of any letters patent under the Great Seal, or which have at any time heretofore been, now are, or shall hereafter be by any public notice or advertisement, or by any written or printed papers or hand bills, or by any label or words, written or printed, affixed to or delivered with any packet, box, bottle, phial, or other enclosure containing the same, held out or recommended to the public by the makers, vendors, or proprietors thereof as nostrume or proprietary medicines or as specifics, or as beneficial to the prevention, cure, or relief of any distemper, malady, ailment, disorder, or complaint incident to or in anywise affecting the human body." So that the schedule seems to include by individual names almost every quack medicine, and then to add a general clause covering every class of pills, lotion, or unguent where there was either occult or secret science in the manufacture or right or title to making the same, whether by letters patent or by some peculiar paper recommending it upon the packet, box or bottle. That

was the state of things up to the year 1833. It may, however, be mentioned that by the fourth section of that Act retail vendors, persons who were victuallers, confectioners, pastry-cooks, fruiterers, or other shopkeepers might sell those articles if they had a stamp upon them, without themselves taking out a license, provided it was drunk upon the premises. I suppose the meaning was that some of those things might be drunk upon the premises of the persons selling them in the shape of beverages; and, although they would pay the duty in that way, the person who sold them need not take out a license. In 1833 was passed the Act 3 and 4 William IV., cap. 97, which by section 20 repealed the words to which I have referred under the title "Water" in the schedule of the Act of 52 George III., cap. 150. These are the words of the section which repealed it:—"Whereas by an Act passed in the 52nd year of the reign of King George III., intitled 'An Act to Amend an Act passed in the 44th year of His Majesty's reign for granting stamp duties in Great Britain so far as regards the duties granted on medicines and on licenses for vending the same,' it was enacted that the duties imposed by the said Act of the 44th year of the said king's reign upon divers medicines and medicinal preparations should be deemed and taken to extend to and attach upon the several articles mentioned and set forth in the schedule annexed to the said Act of the 52nd year of the said king's reign; and whereas it is expedient to alter the said schedule in the manner hereinafter mentioned, be it enacted that from and after the 10th day of October in the year 1833 so much of the said schedule as is contained in the following words, that is to say, 'Waters, videlicet, all artificial mineral waters and all waters impregnated with soda or mineral alkali or with carbonic acid gas, and all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters,' shall be, and the same is hereby repealed." Therefore, the effect of that Act is to excise, as it were—I do not wish to make this an *excise* case—and therefore I will say, to cut out of the statute of 52 George III., cap. 150, those words contained under the head "Waters." The argument used by Mr. Herschell was that Lamplough's Pyretic Saline was only taxable under those words, "all artificial waters and all waters impregnated with soda or mineral alkali or with carbonic acid gas," and that when these words were repealed the effect was that the taxability of Lamplough's Pyretic Saline was taken away, and Lamplough's Pyretic Saline might for the future be sold without paying any duty or without a stamp. And he urged that if Lamplough's Pyretic Saline was within those words during the existence of the Act of 52 George III., it could not be within the general words at the tail of the clause of the Taxing Act, and, therefore, when you excise the words which included it that you could not bring it in at the tail of the clause, which, perhaps, it might have come within if those words which have been excised had never been in the statute. That was a very ingenious, and I may say, indeed, a very captivating argument. But we have to consider what was the effect of the repealing statute, and I am of opinion that its effect is that those words, as they stand in the schedule to the Act 52 George III., cap. 150, are, as it were, taken out of the schedule, and that after the year 1833 the statute was to be read in every respect as if those words were not in it. So reading it, then, it is clear that Lamplough's Pyretic Saline would come within the words of the statute as they now stand, that is to say, in the general words to be found in the revised statute as they stand in the tail of the clause, to which I may refer presently. Now, am I right in supposing that that is the effect of repealing the statute? Mr. Herschell said, if that is the way in which it is to be read, supposing there was to be a statute passed in which they said they would repeal, for instance, the tax on Arquebusado Water, you could not hold that Arquebusado Water would come within the general terms of all the statutes. My answer to that is that if the Legislature intended to repeal the duty on Arquebusado Water they would say so in so many words. They would say "Arquebusado Water shall no longer be liable to the duty;" but, as they have not said so, it must come within the general rule. Now my view of the effect of a repealing statute is not without authority. I find that in the case of *Kay v. Goodwin* in 6 Bingham's Reports, p. 576, the then Chief Justice of the Common Pleas, Lord Chief Justice Tindal, says, "I take the effect of repealing a statute to be to obliterate it as completely from the records of Parliament as if it had never passed; and it must be considered as a law that never existed except for the purpose of those actions which were commenced, prosecuted, and concluded

while it was an existing law." I apprehend that that would apply equally to words in a schedule which the Legislature repeals. There is also an authority in the ninth volume of *Barnewell and Cresswell*, in which Lord Tenterden says, at p. 752, in the case of *Surtees v. Ellisen*, "It has been long established that when an Act of Parliament is repealed it must be considered (except as to transactions passed and closed) as if it had never existed." If, therefore, I look now at the effect of the present revised statute I take it that these words are clearly out of the statute. Then it is quite obvious that Lamplough's Pyretic Saline would come within the tail clause, as we have called it, of the schedule in which reference has been made to a variety of things and a variety of waters, because it goes on to say, "All other pills, powders, lozenges, tinctures, potions, cordials, electuaries, plasters, unguents, salves, drops, lotions, oils, spirits, medicated herbs, and waters," and so on, "which shall at any time have a written or a printed paper on the box or packet holding out or recommending to the public those articles as nostrums, proprietary medicines, or specifics." Therefore I take it that the effect is to take those words out of the schedule. Then, as the schedule would stand, Lamplough's Pyretic Saline comes clearly within it; that is, assuming (as I have done for the purpose of dealing with Mr. Herschell's argument) that Lamplough's Pyretic Saline might have been included in the word "waters." I am by no means prepared to say that it was; on the contrary, I think that prior to the statute of 1833 Lamplough's Pyretic Saline would not have come within those words, but that it would have come within the general words at the tail of the clause, and if I am right in that view of the case, then, clearly, it would continue to be taxable. Now, what is it that comes within those words "waters, videlicet, all artificial waters," &c. I take it that it is pretty well known what is meant by "waters." It is meant to include soda water, Malvern water, Brighton waters—those general waters which are publicly used as beverages—Apollinaris water—though, I suppose, no one knew of that in 1833, as that is a modern discovery—or Taunus water. I apprehend it never was intended to include medicine under that description. But as if to point out clearly what was meant by water, the passage goes on to say, "All artificial mineral waters and all waters impregnated with soda or mineral alkali, or with carbonic acid gas." I suppose the Legislature meant waters impregnated with the soda, or with the mineral alkali, or with carbonic acid gas subsequently alone, but not where that is used for the purpose of making medicine more carefully. Then it goes on to say, "And all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters." Now, what is Lamplough's Pyretic Saline? Lamplough's Pyretic Saline is a compound which is made of tartaric acid in the proportion of 45·7, bicarbonate of soda, 52·4; and chlorate of potassium, 1·9. Chlorate of potassium is a mineral salt and not a constituent of natural mineral salt. It is used as a medicine for fevers, and it is that which gives it, as it is said, its medicinal property. It produces no part of the effervescence. Tartaric acid is supposed to be the best acid to evolve carbonic acid gas, but the only function of chlorate of potassium is medicinal; that is to say, the great secret of the medicinal properties of the preparation is chlorate of potassium, but that is disguised and made more acceptable and more easy to be drank by the effervescence, which is produced by the mixing of tartaric acid with bicarbonate of soda, which evolve carbonic acid gas. It is clearly to be looked at in the nature of a medicine, especially when I see an advertisement to say it is to be efficacious in almost every species of ill that human flesh is heir to. It is to cure fevers, eruptions on the skin, measles, gout, blotches and pimples on the face, sickness, headache, nausea, sea-sickness or sickness on a sea voyage, piles, constipation, diarrhoea, yellow and jungle fevers, scarlet fever, typhus fever, heartburn, epidemics, small-pox, and almost everything that can be mentioned. Well, I say the real thing is that it is a medicine which is made more agreeable by the carbonic acid which is evolved by the tartaric acid and the alkali, but still it is a medicine. I cannot think that Lamplough's Pyretic Saline can be called a water impregnated with carbonic acid gas, and I think, therefore, it came before 1833 within the tail clause, namely, "a nostrum or a medicine," and it may well be taken as a medicine which is "held out to notice or recommended by advertisement" when I see such an advertisement as that which is before me. On both these grounds—first, that, as I read the statute, I think it now comes within the meaning of the tail clause; and, secondly, that I think it never was within the mean-

ing of the words "waters, videlicet, all artificial mineral waters, and all waters impregnated with soda or mineral alkali, or with carbonic acid gas, and all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters," so as to become taxable—I think that our judgment ought to be for the Crown.

Mr. BARON CLEASHY said he had arrived at the same conclusion. Taking the statute of George III. as amended by that of William IV., there could not be a doubt that the duty was chargeable. In the tail of the schedule to the Act of George III. all curative waters recommended by advertisement were liable to pay duty. The articles enumerated in the body of the schedule had nothing to do with Pyretic Saline, which was clearly a chemical preparation taken internally, and recommended for the cure of diseases. If any article were specially mentioned in the repealing statute, that would be exempted, as, for instance, if the Act had said that "Ware's Asthmatic Drops" should not in future be chargeable. Particular items and general words were different things. The item "waters" had been dealt with exceptionally before, section four of the Act 52 George III., cap. 150, enacting that as regarded waters mentioned in the schedule, which were sold for consumption on the premises, victuallers, confectioners, &c., need not have a license, but need only sell in stamped bottles. Waters to be drunk on the premises of victuallers, confectioners, &c., were regarded as beverage waters, and not as medicinal waters for the cure of diseases. In dealing afterwards with waters impregnated with mineral alkali, or carbonic acid gas, the language is clear; but, striking those words out altogether, the word "other" in the tail of the schedule would still retain its meaning, and include all curative waters recommended as such as distinguished from waters impregnated with soda or mineral alkali, or with carbonic acid gas. He would not repeat what had been said by Mr. Baron Huddleston as to the meaning of the word "repeal" in an Act of Parliament, but would simply say that in this case the effect was to completely obliterate the repealed passage from the original Act. An apparent difficulty was created by that, as it might give a different meaning to the word "other;" but he did not think the obliteration of the general item "waters" would make a difference in that respect. He had no doubt whatever that judgment ought to be for the Crown.

The LORD CHIEF BARON: I have the misfortune to differ from my learned brethren in this case, and but for the high authority of their opinion, I should have said without hesitation or doubt that the preparation in question is not subject to this duty. The whole argument on the part of the Crown appears to me to be based upon a confusion of two things which are essentially different. First, they confound an Act of Parliament with a particular clause in an Act of Parliament; and, secondly, they confound one particular article or preparation with a class of articles or preparations. I think if these distinctions are kept in mind in considering the case, there will be no difficulty in putting a proper construction upon both portions of the Act of Parliament passed in 1812, and in holding that the preparation in question was exempted from the duty by the Act of 1833. By various Acts of Parliament a great number of what are called patent medicines (but which are sometimes called quack medicines) were taxed, as also were a great many other preparations; for though the greater number of articles named in the schedule were undoubtedly medicines in the ordinary sense of the word, still there were a great many articles named which were clearly not medicines at all, as, for instance, tooth powders, cosmetics, and other articles used for the toilet. Therefore we ought not to refer to the provisions of this Act of Parliament of 1812, and particularly to what has been called the tail of the schedule to that Act, by the general term "medicines." I will call them "preparations," which is a term that will apply not only to every description of medicine and of water which can be the subject of any of these provisions, but likewise to those articles of the toilet which are clearly within the provisions of the statute. The state of the law down to the year 1833 was simply this, that by various Acts of Parliament (but more especially the Act of 1812) a very great number of articles or preparations of one kind and the other were made subject to the duties in question. We find that by the Act of 1812 the law upon this point is in effect consolidated into this, that there are something like 600 articles or classes of articles expressly made, by being named in the schedule of this Act, liable to the duty in question. Then follows what has been called the tail

of the schedule, but which is, in truth, a portion of it, and which is equivalent to an actual addition of another clause to the Act. It has been called the tail, and it is introduced by these important words, "And also all other pills, powders, lozenges," and so on. The effect of the Act of Parliament as it stood and as it was in operation until 1833 was simply that 600 articles or classes of articles or preparations, which are especially and specifically mentioned in the schedule, were enacted to be liable to duty. Then follows what has been called the tail end of the schedule, but which is, in truth and in legal effect a totally and wholly distinct clause of the Act of Parliament, to the effect that these 600 articles or classes of articles which were specified, and all other pills, powders, and so forth, were to be taxable. The different grounds on which they were to be taxable were then defined. I will take one only, which will apply to the present case, although there were several others. The clause says, "all other pills, powders," and so forth, mentioning several things, and amongst other things "waters," which have before been, or shall hereafter be, by public notice or advertisement recommended to the public, shall be liable to be taxed; therefore, here were two classes of articles or preparations, the one class expressing the subjects of taxation by their being enumerated or specified, and the other class under a general provision, which was equally clear, namely, those which had been recommended by advertisement were made liable to taxation. Among those specifically mentioned articles or classes of articles is this, "Waters, videlicet, all artificial mineral waters and all waters impregnated with soda or mineral alkali or with carbonic acid gas, and all compositions," and so forth. I refer only to the words which finish with carbonic acid gas because it is to those only it is necessary to refer to say what really was taxable. Besides this, I suppose there were 599 other articles or preparations which, being named specifically, were liable to the duty; and then "all other pills, powders, and waters," among other things, made up, advertised, and recommended by advertisement were also made liable to the duty. The first question, therefore, that arises (and the question that I think pervades the whole case) is, What is the effect of these two provisions taken together? First, that 600 articles or classes of articles expressly specified should be liable to duty, and secondly, that all other articles which should by advertisement be recommended to the public and sold should be liable to duty—that is, that not only waters but a variety of other preparations which have been or shall be recommended to the public by advertisement or otherwise shall also be taxed. Now what is, or rather what was, the meaning then—if there be any difference in the meaning now—of the tail or additional clause coming at the end of the 600 enumerated articles? I cannot entertain a doubt upon it (and neither of my learned brothers has expressed a doubt about it) that the articles made taxable by the tail of this schedule are all different from the 600 articles enumerated and specified in the schedule itself, and, therefore, that for a very long time after this Act of Parliament had been passed these 600 articles or classes of articles were all liable to taxation under the schedule, and that a great variety of other articles and classes of articles (excepting and excluding the whole of the 600 enumerated articles) were made liable under the words "all other pills, powders, waters," and so forth, which are set forth in the tail of the schedule. The meaning, therefore, of the tail of the schedule, in consequence of the whole of its provisions being introduced by the word "other," is that whatever preparations or articles were made liable to taxation by this tail of the schedule were all different from and did not include any one of the 600 enumerated articles. It is quite possible that at the time when this Act of Parliament was passed the article in question, "water impregnated with soda or with carbonic acid gas" (which was made taxable in express terms by the schedule) would have been taxable if there had been no schedule at all, but instead thereof a provision in the Act of Parliament in the terms of the tail of the schedule, though not introduced by the word "other." I believe that if it had been so dealt with a great many of the articles mentioned in the schedule would still have been taxable under this clause. But they were not taxable under this particular clause, for two reasons: 1st, They were expressly taxed under the schedule itself, being each of them one or more of the 600 enumerated and specified articles; and 2ndly, Although they might have been taxable under that clause at the tail of the schedule if it had stood alone, yet they could not now be taxable under it, as it only relates to "other" preparations—that is, to other and different preparations than

those which had then been enumerated in the schedule. Then, if it be that this article, "water, impregnated with soda or with carbonic acid gas," together with 599 other specified articles, were taxable under the schedule, it may be that but for the schedule, and but for the introduction of this clause by the word "other," and if the clause had stood alone without the word "other," a great many of the articles would have been taxable under the tail of the schedule. The schedule enumerating and specifying all these 600 articles, and then the tail of the schedule being introduced by the word "other," I hold it to be clear that at the time when this Act of Parliament was passed the articles which were taxable under the tail of the schedule were, "other than and different from the articles or classes of articles taxable under the schedule" itself. That is my clear opinion; and I do not think any other construction will give any effect whatsoever to the words. If the Legislature had meant to say that all other preparations which at present are not in existence at all should be taxable under these general words, whether enumerated in the schedule or not, then the word "other" was totally misapplied. I take it, therefore, to be clear that the meaning and effect of this Act of Parliament was that from 1812 to 1833 these 600 articles which were enumerated and specified were taxable under the schedule, and that none of them were taxable under the tail of the schedule, though they might have been if that clause had stood alone, the tail being introduced by the word "other," distinguishing the things there referred to from the 600 articles before enumerated and specified. It has been contended (I own I cannot see how the argument can be supported) that this particular article called Lamplough's Pyretic Saline is not and never was within the schedule at all. Now, when we look at the schedule we find Warren's Analeptic Powders, Warren's British Tooth Powders, and then "Waters, viz., all artificial mineral waters." Those words I may pass by, but I must consider the next words, "and all waters impregnated with soda or mineral alkali, or with carbonic acid gas." This preparation is impregnated with soda and with carbonic acid gas. Why, then, in the name of common sense and of everything that should guide and govern the construction of statutes, should not this be taxable under those words? It is said that because soda or carbonic acid gas are to be found in the preparation, mixed with chlorate of potassium or something of that kind, these waters contained chlorate of potassium; but what in the world has that to do with the plain and expressed words here to be found, "all waters impregnated with soda or carbonic acid?" It certainly cannot be said that this is not impregnated with soda or carbonic acid gas, and whether it is impregnated with 40 or 100 other ingredients, either in a separate chemical condition or in combination, can certainly make no difference. I have, in every judgment that it has been my fortune to pronounce since I first took my seat on this Bench, endeavoured not to depart from the plain unambiguous words of an Act of Parliament to enter upon a speculation whether, because something not to be found in an Act of Parliament exists, and may possibly be applicable to the provision in question, we are to do away with and treat as not existing the express, clear, unambiguous words which we can find. Is it not enough, particularly in a case of exempting a specific article from taxation, if I find that it is clearly exempted from the duty? At present, however, I am considering that it was originally made liable to the duty. If I find that every article coming within these words, "waters impregnated with soda or with carbonic acid gas," is liable to the duty, and a question arises, Is that particular article liable or not? then I say that there is clearly proof positive (in fact, it is admitted) that it is impregnated with soda or with carbonic acid gas, and what right have I to set aside those words and treat them as if they were not within the Act of Parliament because there is something else of a different character than soda or carbonic acid gas, or to say upon that sort of speculation, and by superadding words not to be found in the Act of Parliament, or in the provision of the Act in question, that the whole effect of the Act of Parliament is to be done away with, and the article is not to be considered liable to duty? I therefore hold, upon these clear and express words of the Act of Parliament of 1812, this being a water impregnated with soda or with carbonic acid gas, that it was one of the enumerated and specified articles then made liable to the duty just as much as any other of the remaining 599 articles were. That was the state of the law in 1812, and it so continued until the month of August, 1833. I ought, however, to refer to the fourth section of the Act of 1812, which provides

that as to confectioners and certain other dealers in articles of this description who shall only sell any of the artificial or other waters mentioned in the schedule, it shall not be necessary for them to take out a license. Well, for aught I know, that may apply to some of these waters impregnated with soda or with carbonic acid gas; but it only goes to relieving from liability, and giving a species of immunity to a certain class of dealers in articles of this description in relation to some portion of the articles or preparations included within this article in the schedule. It is no more than that. If it had been added expressly to the article, saying, "all waters impregnated with soda or with carbonic acid gas should be liable to the duty, but confectioners and other dealers should not be liable to take out a license for certain articles which may or may not come within the words of this provision," that would only go to qualify it to a certain extent. There stand those words of the fourth section still untouched, unimpaired; and not only unrepealed, but wholly unaffected. We now come to the great question in the case. Such was the construction of the Act of Parliament from 1812 till August 1833; and once again let me say, the construction and meaning and effect of the statute during all that long period of time was that 600 articles or preparations, and among others "waters impregnated with soda or with carbonic acid gas," were liable to taxation; and, besides those, a number of other descriptions of preparations, but "other than and different from all or any of the enumerated and specified articles," were likewise to be subject to taxation. It might have been that if they had not been enumerated in the schedule many of them would have come within the definition of the words, "all other articles to be sold or recommended by advertisement to the public." But if they were taxable under the schedule because they were specified and enumerated, they could not be taxable under the tail of the schedule, because that applies only to those which are other than and different from those which had previously been enumerated. That, I take it, was the construction of the statute down to August, 1833, when there was a repeal, not of the statute, but of a very short clause in the statute, namely, the clause which rendered taxable waters, among others, impregnated with soda or with carbonic acid gas. Throughout the argument of the counsel for the Crown in this case, the Act of 1833 was invariably spoken of as if it repealed the statute, and the statute was confounded with the particular clause of it which was repealed. What was done by the Act of 1833 was not to repeal the statute, but only to repeal a very small part of it indeed—what might in truth be called the 600th part of the schedule, for all that was repealed was the words, "waters, viz., all artificial mineral waters, and all waters impregnated with soda or mineral alkali, or with carbonic acid gas, and all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters." Now, what was the effect of that repeal? Of course, in looking at that, I assume that it was taxable under the words, "waters impregnated with soda or with carbonic acid gas;" because, if that were not so, I should agree with my learned brethren that it would be taxable under the words in the tail of the schedule. The section of the Act which repeals this recites the Act a portion of which it was repealing, and enacts that a certain portion of the schedule to that Act should be repealed. It would appear, from the schedule to this Act, that by the Act of 1812 the provisions of a previous Act of Parliament, which had rendered certain articles taxable, were then made to apply to waters impregnated with soda or with carbonic acid gas. Suppose it had been stated in express terms: "Whereas, by an Act of Parliament, passed in the 52nd year of King George III., intituled," and so forth, it was enacted that the duties imposed by a previous Act should be taken to extend to and attach to all articles coming within the description of waters impregnated with soda or with carbonic acid gas; and that that had been followed by the repealing words of this statute—"And whereas it is expedient to alter the said schedule in the manner hereinafter mentioned, Be it enacted, that from and after the 10th of October, in the year 1833, so much of the said schedule as is contained in the following words," containing among them "all waters impregnated with soda, or with carbonic acid gas, shall be, and the same is hereby repealed," the meaning of that would be perfectly clear. The meaning would be that if waters impregnated with soda, or with carbonic acid gas, were to fall under the schedule of the Act of 1812, so as to be liable to the duty and taxable, the provision as to the article is clearly taken out of the schedule

so that they shall be no longer liable to duty and taxable. I take that to be the plain and simple meaning of the Act of Parliament. If anybody had said to persons dealing in this particular article, "Why, you have hitherto paid the duty upon this article, but here is an Act of Parliament which cuts this quite out of the schedule under which you are made liable to it," they would very naturally have said, "Then I am free." Then comes the question, "What was the meaning of the additional clause at the tail of the schedule until the subsequent Act was passed?" I will consider presently its effect after that Act was passed. Now, I think the meaning was as plain as possible. If, instead of taking 600 articles, 3 articles which are to be found together had been taken, and by the schedule it had been enacted that Warren's Analeptic Powders, Warren's Tooth Powder, and all articles impregnated with soda or with carbonic acid gas should be liable to be taxed, and if the liability to taxation of those three articles had been repealed by this 20th section of the Act of 1833, what would then have been the meaning of the other? Why, the Crown must have given this very strained construction to the Act of Parliament, that though in express terms the particular article is liable no longer to duty, yet under another clause in the same Act it is nevertheless to be liable to duty. It is not here the Act of Parliament which imposed the duty, but it is a clause in that Act, which is repealed by the later Act of Parliament—the Act of 1833; and yet it is said, "Yes, it is true these articles are no longer made liable to the duty, but they are still liable to duty under a subsequent clause." We have only to substitute the word "clause" for "Act of Parliament" and then all the dicta of Lord Tenterden and Lord Chief Justice Tindal, which have been referred to, are applicable to the case. Here no Act of Parliament is repealed; the Act of 1812 is not repealed, but it is still in force probably as to thousands of articles which were by it made the subject of taxation; it is only a particular clause of that Act that is repealed. Substituting the word "clause" for "Act of Parliament," I adopt the very words of the learned judges whom I have just referred to, and say that this clause is to be taken as if it had never existed; that is to say, this portion of the clause which taxes these artificial waters is repealed, and is to be taken as if it had never existed. Then, if that be so, this would never be the subject of taxation. But what effect has that upon another and a different clause, which it is admitted applied before the repealing Act to other objects, and did not include this preparation. Why, no one ever contended—and certainly no judge ever laid down as law—that where a particular clause in an Act of Parliament is repealed it must be taken as if the whole Act of Parliament had never been enacted, but it must simply be taken as if this clause had never been enacted; and if this clause had never been enacted, then no duty would ever have been put upon these waters. Then what is the meaning of the tail of the schedule? Because, if this clause is taken to be repealed, we have simply to consider the meaning of the tail of the schedule at the time the Act was passed. Why, it is this—"Whereas 600 articles above enumerated are liable to taxation, all 'other' articles of a certain description which shall be advertised and recommended to be sold to the public shall likewise be liable to taxation." "Other articles" means articles or classes of articles different from those which are already taxed by the schedule. It is "others" alone which were, or can continue to be, the subject of this enactment. It has still the same meaning. Where an article has been expressly taxed, enumerated, and specified in a schedule, and afterwards the tax upon that article has been repealed, you cannot say that the moment that tax was repealed a different meaning was given to another clause of the Act of Parliament which taxes a totally different description of articles; because an additional must be a different description of articles. I think, therefore, that it is only by confounding two things which are different from each other, viz., an entire Act of Parliament with a particular clause of an Act of Parliament, that you can say the repeal of a particular clause of an Act of Parliament causes the whole Act of Parliament to be treated as if it had never existed. The repeal of that clause has indeed the effect of treating that clause of the Act of Parliament as if it had never been enacted; and, if it had never been enacted, the meaning of the clause at the tail of the schedule would still have been the same. It means to include articles which are additional to those which are enumerated, and would perhaps include 1,000 preparations, but each and all of them different from any of the 600 enumerated articles. If you treat this clause as being the thing referred to, and not the entire Act of

Parliament, then everything becomes plain, and these 600 articles which are enumerated and specified are liable to taxation; but as to each of them the law has been repealed, and that is no longer liable to taxation. But as to the 1,000 articles which were included in that clause they still remain liable to taxation. That clause remains in force with the same meaning and the same effect as it had from the beginning when it was enacted, in the year 1812: it does not include now things which it did not include then. There are no words in the Act of 1833 to make it include "the before specified and enumerated articles." I think also the same fallacy exists in confounding a particular article with a class of articles which are here made liable to taxation, and which liability is put an end to by the repealing Act so far as regards waters impregnated with soda or with carbonic acid gas. It is no matter whether that represents a single preparation, like that sold by the defendant in this case, or whether it includes a large and numerous class of articles; whether it is the one or the other it was made liable to taxation by the Act of 1812, but, that clause being repealed by the Act of 1833, it ceased to be liable to taxation. Then when we come to the main clause, which says, "And also all other pills, powders," and so forth, that refers to a different and distinct class of articles that were liable to taxation from 1812 to 1833, and have so continued from 1833 to the present day. That must be so, unless we strike out of the clause the word "other," and treat it as making even the articles mentioned in the schedule liable to taxation on other grounds, although their liability might be expressly put an end to under and by the provisions of a subsequent Act of Parliament. I think, therefore, that these waters were made liable to taxation by the Act of 1812, and—that portion of the schedule being repealed by the Act of 1833—that they then ceased to be liable to taxation; and I think with regard to the clause which has been called the tail of the schedule that it never did and never could apply to any one of the articles which, in 1812, were enumerated in the schedule, and that the provisions do not apply now to any articles but such as are additional to and different from the articles which were then enumerated in the schedule. In dealing with a question of taxation, when in express words the liability to a particular tax has been put an end to and repealed I think there is something startling in telling a man who deals in the particular article which was formerly subject to the tax, "You are still liable, and the repeal goes for nothing." Nothing but some inflexible rule of law would induce me to hold that such was the effect of this Act of Parliament. I think, therefore, that the article in question was liable to taxation by the Act of 1812, that it ceased to be liable under the Act of 1833, and that with regard to the tail of the schedule it never made any one of the articles ever enumerated in that schedule liable to taxation, and that it does not make any of those articles liable now. On these grounds I think our judgment ought to be against the Crown, but, the majority of the Court being of another opinion, the judgment will be in favour of the Crown.

Mr. DICEY: I suppose the costs will follow the judgment.

Mr. BARON CLEASBY: Yes.

MITCHELL V. CONDY—CONDY V. MITCHELL.

THESE cases came before the High Court of Justice, Chancery Division, on June 14 and 15, before Vice-Chancellor Sir James Bacon. They were suits instituted respectively by Dr. Mitchell and Mr. Condy, formerly partners in the firm of Bollmann Condy & Co., manufacturers of and traders in Condy's Patent Fluid, Condy's Ozonised Water, and other chemical preparations. The object of the former suit was to ask for an order for a statement of accounts, and in reply to the cross suit to obtain a declaration by the Court as to who was or were entitled to the goodwill of the business and to the right to manufacture and sell the articles called Condy's Fluid and Condy's Ozonised Water, and also to use the name of Condy or the name of the firm in connection with the articles and the sale thereof, and for other consequential relief. Mr. Condy, by the cross bill of Condy v. Mitchell, sought to restrain Dr. Mitchell and the other defendants from selling or offering for sale as Condy's any of the disinfecting fluid or ozonised water not manufactured by or on behalf of the plaintiff, and also from using the plaintiff's name of Condy in connection with or as a part of the description of any of the disinfecting fluid or ozonised water manufactured and sold by the defendants in such manner as

to lead to the relief or to be calculated to lead to the relief that the articles of the defendants' manufacture were manufactured by or on behalf of the plaintiff, or that the plaintiff was in any way interested in the sale or responsible for the quality thereof; and that the defendants might be restrained from using the name of Condry as part of the style under which the defendants carried on business, and also from otherwise making use of the plaintiff's name in such manner as to lead to the belief or tend to lead to the belief that the plaintiff was a member of any company or firm of which the plaintiff was not in fact a member. On November 19, 1874, Mr. Condry applied, in the suit of Condry v. Mitchell, for an injunction, to restrain Dr. Mitchell from using on the labels of the bottles in which the defendant's Fluid was sold the words, "Without a strip identical to this no bottle of Condry's Fluid is genuine." By arrangement between the parties, it was agreed that neither side should use such words on their labels, and the rest of the motion was ordered to stand over, and to come on for hearing with the two suits.

Mr. Kay, Q.C., and Mr. Woodroffe, instructed by Messrs. Morrisons, of 94 Cannon Street, appeared for Dr. Mitchell. Mr. Hemming, Q.C., with whom was Mr. Bradford, instructed by Messrs. G. & W. Webb & Pearson, of 11 Austin Friars, represented Mr. Condry.

The facts of the case, so far as it is necessary to refer to them, were that in July, 1856, letters patent were granted to Mr. Condry for his invention or discovery of a method of manufacturing a chemical preparation in a fluid form as a disinfectant and purifying agent. For several years after the date of the patent he manufactured and sold the Fluid in large quantities and realised considerable profit thereby. The article so manufactured and sold by Mr. Condry was distinguished from other disinfectants in the market by the use of the name of Condry, and was generally described as Condry's Patent Fluid or Natural Disinfectant, or Condry's Fluid. In addition to the manufacture and sale of this Fluid, he manufactured and sold other chemical preparations, including a preparation known as Ozonised Water, and described and distinguished as Condry's Patent Ozonised Water. On March 25, 1870, Dr. Mitchell entered into partnership with Mr. Condry, and they became partners in the manufacture of and trade in Condry's Patent Fluid and other articles of a similar nature manufactured by the then existing firm of Bollmann Condry & Co., from the above date and for the term of their lives, unless the partnership should be dissolved in the manner provided by the articles. One of the provisions was that in case either Condry or Mitchell should be desirous to put an end to the partnership at any time, and should give six months' notice in writing of such desire, then the co-partnership should at the expiration of the six months cease and determine, and thereupon an account and valuation in writing should be made and settled of the stock-in-trade, money, credits, and effects belonging to, and all the debts due from, the co-partnership, and also an account and valuation of the goodwill of the business, which should be taken and accepted as of the value of three years' purchase of the average net profits of the two years preceding the last annual account, and thereupon the partners should pay or make provision for the payment of the debts and the balance of the co-partnership capital and effects and the profits thereof should be divided between the partners according to their shares in the capital. A further provision stipulated that in case the co-partnership should be dissolved by mutual consent or by notice from Dr. Mitchell (given in the manner stated in the preceding clause) at any time during the partnership, the business and the right to manufacture the articles in question, and to use the name of Condry, or of the firm, should remain with and belong alone to Condry, his executors, administrators, or assigns. The partnership continued until October 4, 1873, when, differences having arisen between Mr. Condry and Dr. Mitchell, notice was given to Dr. Mitchell by Mr. Condry of his desire to dissolve the partnership at the expiration of six months from the date thereof. On June 30, 1873, Dr. Mitchell commenced the suit of Mitchell v. Condry, and a receiver and manager of the joint business of Bollmann Condry & Co. was shortly afterwards appointed by the Court. Mr. Condry, in October, 1873, recommenced and carried on business on his own account, and in his own name; and in May, 1874, Dr. Mitchell, in conjunction with his two sons, also established a separate business of a similar nature, under the style of the Condry's Fluid Company. Mr. Condry filed the cross bill of Condry v. Mitchell in July, 1874.

Mr. KAY said that the question in the suit of Mitchell v. Condry was simply the right as between the two partners in the old firm to use the description of Condry's Patent Fluid or Natural Disinfectant. The partnership had been dissolved by notice from Mr. Condry, and the articles of partnership provided for the occurrence of that event. If the partnership were dissolved by notice from one partner to another, then they were to be equally entitled to the goodwill, and to all the benefits of the partnership. Assuming the words Condry's Patent Disinfecting Fluid to be in the nature of a trade mark, then the trade mark would belong as much to the one partner as to the other; but if they did not amount to that, Dr. Mitchell would have just as much right to the description as Condry had, independently of any right arising out of the articles of partnership. The object of the cross suit of Condry v. Mitchell was to endeavour to prevent Dr. Mitchell from using the name of Condry, a right to which both partners, by the provisions of the articles of partnership and under the circumstances which had occurred, were equally entitled. The learned counsel referred to the cases of Hall v. Burrows and Cheavin v. Walker in support of his case. He proceeded: In March, 1870, Dr. Mitchell purchased from Mr. Condry one half share in the preparation and invention, and in the goodwill of the business, for the sum of 1,500*l.*, and subsequently contributed a still further sum of 1,500*l.* as his share of the capital. The articles explicitly stated the names of the particular things in which they were going to trade, not that they were made by A or B, but that those were the names of the chemical preparations to manufacture which they were forming a partnership. But then came the contrast, or rather the statement of what was to happen if the notice of dissolution were given, not by Mr. Condry, but by Dr. Mitchell. In case the co-partnership should be dissolved by mutual consent or by notice from Dr. Mitchell, given in the manner previously mentioned, at any time during the partnership, "the business of the right to manufacture the aforesaid articles, and to use the name of the said Henry Bollmann Condry, of the said firm, shall remain with and belong alone to the said Henry Bollmann Condry, his executors, administrators, and assigns." Therefore, in that event, the right to use the name of Condry was to belong exclusively to Mr. Condry. Nothing could be plainer than the provisions in the articles of partnership. Dr. Mitchell did not agree to dissolve the partnership. It was Mr. Condry who gave the notice, and therefore both partners were equally entitled to use the name of Condry and to the goodwill, part of which consisted in the right to use the wrappers and labels with that name thereon.

Mr. HEMMING inquired what decree was asked in Mitchell v. Condry.

Mr. KAY: That the plaintiffs in that suit were entitled equally with Mr. Condry to the goodwill of the business, and to manufacture and sell the articles called Condry's Fluid and Condry's Ozonised Water, and to use the name of Condry in connection with the articles, and to use the labels and wrappers just as the firm were accustomed to use them.

Mr. HEMMING said that the goodwill was the joint property of the two partners in the sense that they were equally entitled to use the name of Condry's Fluid, provided it were manufactured as Mr. Condry made it.

Mr. KAY submitted that the plaintiffs had in all respects an equal right with Mr. Condry to the use of the name. It was contended that they could apply that description only to a fluid made in a particular way. There was, however, no limitation of the right of each partner to use it as he pleased. Condry's Fluid evolved oxygen when mixed with water in large quantities and exposed to the air. For that reason it had a singular effect as a purifier and disinfectant. There were different ways of making the articles in question. One was by the use of permanganate of lime; another was by the use of permanganate of soda. Mr. Condry thought permanganate of potash was better than permanganate of soda. Dr. Mitchell was of opinion that permanganate of soda was just as good as permanganate of potash, and preferred to use the former. Mr. Condry said that if Dr. Mitchell insisted on the employment of that ingredient he should not use the name which was the common property of the partners. It was ridiculous on the part of Mr. Condry to attempt to put a limit on the use of the name. The Court was relieved from considering any question of law, because the parties had entered into a convention that the use of the name "Condry" was to belong to both partners in the case of such dissolution of the partnership as had taken place. The plain-

tiffs were, therefore, entitled to the declaration he had asked, and to the usual decree for the winding up of the partnership.

Mr. HEMMING: The suit of Mitchell v. Condry was a common partnership suit. It was contended as a matter of law that if a man invented and manufactured any article and called it by his own name that personal name might by degrees become the name of the article, and that as soon as it became the name of the article, and ceased to be a personal designation, anybody had a right to manufacture the same and to call it by that name. That right, however, would depend upon a question of fact whether the article had been sold by that name to such an extent, and under such circumstances, that the name Condry had ceased to be a personal designation, and had become simply the name of the article. Upon that question of fact there was considerable doubt, but it was a matter of little importance whether Dr. Mitchell called the article Condry's Fluid or not, provided he did it honestly. If he really made Condry's Fluid so as not to cast a slur upon the article, and if he said, "I who make it am Mitchell and not Condry," it would not be worth while to go into the question whether everybody had a right to use the name; nor would there be any objection to a declaration that the plaintiff and defendant, in common with all the world, had a right to manufacture the articles which had become known as Condry's Fluid and Condry's Ozonised Water, and to call them by those names. But that must be under a condition attached to every right that anybody could exercise under any circumstances, namely, that it should be done honestly and not fraudulently. It was charged that Dr. Mitchell had in two respects employed that designation, not honestly, but fraudulently: one was that what he made was not the thing which had acquired the name of Condry's Fluid or of Condry's Ozonised Water; another and far more serious complaint was, that instead of making good honest Condry's Fluid and Condry's Ozonised Water, and coming before the world and saying, "I can make Condry's Fluid and Condry's Ozonised Water just as well as Mr. Condry, and I can offer it at a lower price," he made something which was not really Condry's Fluid, although he labelled it as Condry's Fluid; and he hid his own name under the designation, which he chose to assume of The Condry's-Fluid Company. So transparent was the object of that assumption that it was needless to dwell upon it. If the decree were limited to a declaration not peculiar to the plaintiff and defendant, but common to everybody as having the right to use the name of Condry's Fluid and Condry's Ozonised Water, subject to the qualification mentioned, it would not be objected to.

Mr. KAY observed that he was entitled to a declaration based upon the terms of the articles of partnership between the parties, and that the name was just as much the property of Dr. Mitchell as of Mr. Condry.

Mr. HEMMING: Was the use of the name to be understood as including the right of the plaintiffs to call themselves Condry?

Mr. KAY: The right to use the name of Condry in their business according to the partnership articles.

Mr. HEMMING: With regard to the other suit of Condry v. Mitchell. At the time Mr. Condry took out a patent for his Disinfectant Fluid a great many disinfectant fluids were manufactured by different persons, always in their own names, and were competing in the market, but Condry's Fluid succeeded in distancing all competitors. Among others there were Cole's Disinfecting Fluid, Braddick and Bradshaw's Disinfecting Fluid, Calvert's Carbolic Acid, MacDougall's Carbolic Acid, Sir W. Burnett's Disinfecting Fluid, Beaufoy's Disinfecting Fluid, and Collins' Disinfecting Powders. Cole's Fluid and Braddick and Bradshaw's Fluid were made of permanganate of potash, and it would be proved that Condry's Fluid as manufactured by Dr. Mitchell was similar to theirs. Mr. Condry's Fluid was always made, not of permanganate of potash, but of permanganate of soda, and those substances were different, for, in the first place, permanganate of soda was a more effective disinfectant than permanganate of potash, and, secondly, instead of being an article that could be bought anywhere in any market, the person requiring it must make it, and its production was costly. A similar distinction existed with respect to Ozonised Water. Condry's Ozonised Water was composed principally of permanganate of lime, and that required a more expensive preparation than permanganate of soda, although both might be made out of permanganate of potash. The markets were well supplied with the last mentioned article, which was the waste from certain other chemical products. Mr. Condry used permanganate of

soda for his Condry's Fluid, that is, for the superior quality, and for the inferior he used manganate of soda instead of permanganate of soda. While the partnership existed, the firm manufactured Condry's Fluid with the same ingredients Condry had previously used. Shortly after the dissolution of the partnership, Mr. Condry, having recommenced business in his own name and on his own account, manufactured the Fluid and the Ozonised Water with the old materials, and under the old name. In May, 1874, Dr. Mitchell also set up business, with his two sons, but instead of calling themselves Mitchell & Sons, or James Barr Mitchell & Co., or any name that would show it was Mitchell's business, they assumed the name of The Condry's-Fluid Company. The question was whether Dr. Mitchell had the right to manufacture Condry's Fluid, and call himself The Condry's-Fluid Company, inducing purchasers to believe that Mr. Condry was concerned in that manufacture of the article. If Dr. Mitchell had given notice of dissolution of partnership, Mr. Condry would have had the exclusive right of carrying on the manufacture of these articles and of using the name of Condry; but there was no correlative clause giving a similar right to Dr. Mitchell in the event of the partnership being dissolved by Condry. The right to use the name of the old firm was to be exercised only by the receiver and manager. Mr. Condry claimed no right derived from the partnership deed except to divide the assets of the old firm in certain specific proportions. There was an order in 1876 by which the receiver and manager was to be at liberty to close the partnership business, to sell the stock-in-trade, plant, implements, and materials, to give up possession of the business premises, and to pass his final account.

Mr. KAY: The receiver had passed his final account, and the balance was 111*l*.

Mr. HEMMING: The receiver had carried on the business at a loss, and the goodwill was worth nothing; so that there was nothing to sell. As to the right to use a personal name after it became the name of the article, it could be done only on the condition that it was done honestly, by showing that the person using the name was the manufacturer and not the individual under whose name the articles were sold. And according to the case of James v. James, it would seem that even if he sold anything made with different materials or that he alleged he was in possession of the true ingredients, and that representation was untrue, he might be restrained.

The VICE-CHANCELLOR: I do not know the meaning of that. If Dr. Mitchell had sold brandy-and-water as Condry's Fluid, could this Court have restrained him?

Mr. HEMMING: Yes; according to the dicta in that case. The learned counsel having read the evidence, concluded by saying that both upon the authorities and the facts of the case, Mr. Condry was fully entitled to the relief which he prayed.

The VICE-CHANCELLOR, in delivering judgment, said: The only question in this case is as to the use of this particular article, for I have heard nothing said that amounts to fraud on the part of the defendant, Dr. Mitchell. The case is very plain. Mr. Condry, by his ingenuity and skill, invents a particular composition, takes out a patent for it, and impresses his name upon it. He calls the article which he sells Condry's Fluid. That particular thing comes to be an article of commerce, and is vended at all the chemists' shops in the empire. He then takes in a partner. The consequence of that was that the man who was so taken in as partner became as much the owner of the patent (which was then in existence) as Mr. Condry himself was. I do not know whether he was as much the owner of the invention as he was the owner of the right to sell that particular article upon which Mr. Condry had impressed his name. That is not to be considered as Mr. Condry's name, it has nothing to do with Mr. Condry personally; but it is, that he has impressed a name on that particular commodity, and the two persons who were joined together in partnership have become possessed in equal shares of that particular thing and the right to compound and sell it. They remain in partnership for a short time, when they dissolve their partnership. Under the terms of the partnership deed Mr. Condry avails himself of the right to put an end to the partnership, and the immediate consequence provided for by the deed is that all the plant, goodwill, and everything else belonging to the business shall become divisible between the two partners. A suit has been instituted for the purpose of winding up that partnership, and a receiver has been appointed. The joint trade was carried on by the receiver for a time. In the meantime, each of the partners—Dr. Mitchell

and Mr. Condry—exercised his own right to sell Condry's Fluid. Mr. Condry takes the precaution of signing his name upon the label which is put upon the article he sells. Dr. Mitchell, by his circulars, announces to the world that he is the manager of a company which he then forms, which is not the less a company because it consists of three persons. There is no fraud in that; nobody is injured or misled by that, and that is the arrangement which the parties in trade chose to adopt for themselves. However, from the time of the appointment of the receiver, or, perhaps, earlier, each of these persons has been carrying on separately that trade in which they were before jointly interested. They have each been carrying on their business in the same name, with the same shaped bottle, with identical labels, only that one of them signs his name "Condry" to it, and the other signs in the name of a company which he has formed and of which he is manager. What can such a case as that have to do with the authorities that have been referred to, in which somebody who was wholly unauthorised had taken up a name which was not his own, and which, *prima facie*, he had no right to, but which the Court held to be perfectly excusable if at the same time the persons doing this printed or affixed their own names to the commodities they dealt in. The Court has not in any case gone the length of prescribing that a person having a right to use a particular name (which right could not be impeached by any legal proceedings) was bound to put his own name upon it: all the Court has ever said is, "You must not deal with it so as to mislead the public." Then comes the question, Is the public misled in this case? The only evidence upon the subject is that a certain number of gentlemen (physicians and others) come and say, "I sent for Condry's Fluid: upon looking at what was brought me, when my attention was closely called to it, I found it was different, though there was such a resemblance to it that at first I did not see the difference; therefore I was misled." Why, that is not misleading at all. If there is any misleading it is the fault of the purchaser, for the defendant has done nothing whatever to mislead the purchaser. Dr. Mitchell has a right to compound and sell Condry's Fluid; he has exercised that right; he is under no obligation to put his own name upon it; he has not assumed Mr. Condry's name; he has not adopted Mr. Condry's late place of business; he has not represented in any single particular, as far as the evidence goes, that that which he is selling is the article manufactured by Mr. Condry; but what he is selling is Condry's Fluid, which it is his right to make and sell as he thinks fit. Whether he makes it or not of the same ingredients as Mr. Condry does is a matter which we cannot inquire into. If he has compounded it of other ingredients that is a thing which I have no power to prevent. Dr. Mitchell has a right to do so; and, if he has done so, he has done it in exercise of that right, and by actual contract between the parties, by which contract mutual rights were created between the parties which cannot be abrogated. There is another part of the evidence which I have not listened to with any kind of satisfaction. Porters and boys are sent into a shop with a slip of paper for Mr. Condry's Disinfecting Fluid, which has been taken down from a shelf where it was placed, and has turned out to be Dr. Mitchell's Disinfecting Fluid instead of Mr. Condry's; and it is said that that is calculated to deceive the public. If there had been evidence to show that these porters and boys were sent in to ask for "Condry's Disinfecting Fluid, manufactured by the well-known Mr. Condry, of Battersea;" and if they had then been served with the Fluid manufactured by Dr. Mitchell, there might have been something to talk about. But after all, to say the least, this is a mere trap—a mere bolstering up of evidence or what is pretended to be evidence, and applying it to circumstances which have no application whatever to the case. The contract for the partnership is very plain; the mutual rights of the parties are plain; they use the same labels, which each of them has a perfect right to do; neither of them has a right to say to the public or to anyone else, "I am manufacturing and selling the other man's goods." And there is no pretence for saying that Dr. Mitchell has done that in any particular instance. I think that Dr. Mitchell is entitled under his contract with Mr. Condry to that for which he has paid, and for which Mr. Condry has received his money, and that he is entitled to the declaration for which he asks, namely, that he is at perfect liberty to sell Condry's Fluid and Condry's Ozonised Water in any way that he thinks fit, except only—though that is not to be expressed in the order—that he must not so describe the commodity he sells as to induce the public to

believe it is the Fluid which is made by Mr. Condry, of Battersea. In my opinion the bill in *Condry v. Mitchell* cannot be sustained. The bill in *Mitchell v. Condry* asks for relief, to which the plaintiff is entitled. There must, therefore, be the ordinary decree for taking the partnership accounts, accompanied by the declaration I have mentioned, which the suit instituted by Mr. Condry makes absolutely necessary.

GRAINS OF PARADISE IN BEER.

A BREWER at Wednesbury was recently fined 50*l.* for using grains of paradise in his beer. It was placed therein without his knowledge and during his absence from ill-health.

SMOKE.

ON May 17 Messrs. Wright & Co., manufacturing chemists, were fined 20*s.* and 28*s.* 3*d.* costs for allowing smoke to escape unconsumed from their premises in Southwark Street.

DIVORCE CASES.

A FEW divorce cases, which may perhaps interest some of our readers, have been decided this month.

A medical man named Lineker, of Hull, was guilty of cruelty to his wife. Judicial separation, with costs.

Against Mayer, a Jew chiropodist, a decree nisi, with costs, was pronounced on the grounds of adultery and cruelty.

A quack doctor and herbalist named Plant levanted to America and became a Mormon after being guilty of cruelty to his wife. Decree nisi, and costs.

The wife of Mr. Pittis, of Charlton, in Kent, chemist, pleaded for divorce by reason of the husband's adultery and cruelty. Decree nisi, with costs.

ADULTERATED SWEET SPIRIT OF NITRE.

THREE parties were recently prosecuted at the Bradford Borough Court for the sale of diluted sweet spirit of nitre. The defendants were Stephenson Brothers, grocers, George Batty, herbalist, and J. R. Lund, chemist. The three samples tested contained respectively 26 per cent., 27 per cent., and 20 per cent. of water more than the standard. They were almost tasteless, and gave but very faint indications of the presence of nitrous ether. For the defendant Lund it was argued that a weaker spirit of nitre than the standard was a regular article of sale. This had been sold at 2½*d.* per ounce, at which price the standard article could not be obtained. The magistrates imposed a fine in each case of 1*l.* and 3*l.* 10*s.* costs.

PROSECUTION UNDER THE PHARMACY ACT.

ON June 25 C. W. Clarke, a grocer and draper, of Martham, Norfolk, was charged with selling a preparation containing opium, to wit, "Nurses' Drops," he not being on the register of chemists and druggists.

The bottle containing it was not labelled in any way. A dose, said to be only two drops, was administered to John Morse, aged seven weeks, who died within a few hours. The surgeon who was called in, Mr. Cufaupe, suspected narcotic poison, and the stomach and bottle were sealed and forwarded to Mr. F. Sutton, county analyst, who found both to contain morphia and meconic acid. The jury, at the inquest, returned a verdict that it was doubtful whether the Nurses' Drops had any influence in accelerating the death: but on the day in question Mr. Clarke was fined 4*l.*, and 3*l.* 1*s.* 6*d.* costs, for his infringement of the Pharmacy Act in selling the drops.

THORLEY'S FOOD FOR CATTLE.

THE executors of Joseph Thorley, who died last November, brought an action on June 14 against the brother of the deceased, Josiah Watson Thorley, to try to prevent him and a company including him from manufacturing "Thorley's Food for Cattle," of which they claimed in some respects a monopoly. J. W. Thorley had been manager for his brother for 20 years. He knew perfectly well how to make the food, having obtained his knowledge, he claims, from the person who imparted the

secret to Joseph Thorley. In March of this year a company was brought out by Jesiah Watsen Thorley and six other original subscribers to make and sell Thorley's Food for Cattle at reduced prices. The capital of the company was 200*l.*, in 4,000 shares of 1*s.* each. Vice-Chancellor Sir R. Malins thought the defendant had a right to use his knowledge as he had done. The article was not patented. He must not in any way lead the public to believe that they were buying the condiment manufactured by the plaintiffs. He refused the motion, with costs.

Having lost their action, the plaintiffs issued advertisements in which occurred the assertion that they only were "possessed of the secret of compounding that famous condiment." The company on this came before Vice-Chancellor Sir R. Malins on June 30, with an interlocutory application praying for an injunction to restrain such advertisements. The Vice-Chancellor strongly condemned the advertisements, but it appeared that there were some legal difficulties in the way of prohibiting the publication of a libel. The Court of Appeal had held that this could not be done. His Lordship thought the Judicature Act gave him power to prohibit such publication, but the point being new, he preferred to refuse the motion now, hoping that the defendants would expunge the objectionable words from their advertisements.

GIN OR GIN AND WATER.

A DECISION in the Court of Queen's Bench on June 13 settled the question of the legal strength of gin. A publican had sold some at 2*s.* and 1*s.* 4*d.* per pint. The cheaper quality was manufactured by the addition of water. Was this admixture of water an adulteration within the meaning of the Act? A magistrate at Burslem had convicted the publican, who now appealed. Mr. Poland argued for the publican, and Mr. Bosanquet for the public. As gin always contains some water, Mr. Poland argued that, within reason, it was still gin, whether it contained more or less. He thought this was not parallel with milk, as gin was a manufactured and milk a natural product. The judges, however, confirmed the conviction, and it appears, therefore, that gin should be expected to contain from 20 to 22 per cent. of spirit.

PERSONATIONS AT THE PRELIMINARY EXAMINATION.

A SERIES of frauds on the Pharmaceutical Society have recently been brought to light, and the offenders are awaiting punishment.

On June 25 George F. Webb, in the employ of Mr. Nockolds, of the Goldthorpe Road, was charged at Bow Street with allowing Andrew Ritchie Hunter to impersonate him at a Preliminary examination, conducted by Mr. W. Griffith Hayward, at Reading, and with thereby falsely obtaining his registration. On July 6 the said Andrew Ritchie Hunter, who had been arrested at Wolverhampton, was charged with the above offence. It was stated that on previous occasions he had impersonated two others, named Hinke and Colegrove, both of whom had been committed for trial. Up to the present time Ritchie had escaped arrest.

On the 7th instant Frank Oates, aged 24, in the employ of Mr. Scholefield, Ravensthorpe, near Dewsbury, was charged with an offence similar to that of Webb.

Webb was committed for trial, and Hunter and Oates will be brought up on Monday, the 16th instant, for further examination. The employers of all these three gentlemen gave them good characters, especially Hunter.

A NEW ACCOUNT.

At the Guildhall, on July 12, after two remands, Charles Stanley Butler, of St. Andrew's Street, Bethnal Green, 51 Duke Street, Aldgate, and 78 Chessman Road, Old Ford, and Richard Midwinter, who said he lived at 51 Duke Street, Aldgate, one of Butler's places, were charged on remand with obtaining goods by false pretences. The facts were that on June 4 a person called upon Messrs. Herrings & Co., wholesale druggists, of 40 Aldersgate Street, and presented a card with the name of G. Butler upon it, and wanted some quotations of drugs. Mr. Augustus Herring wrote the prices on the card, and the next day Butler's servant called with an order for some of those goods, amounting to 20*l.* 8*s.* 11*d.* He declined to send them without the money, and the day after he received a letter asking him to send Mr. Butler an invoice, which he did. On the following

day the person who had previously called came and said he had drawn a cheque for the full amount, but he complained of the high price of the tartaric acid, and asked if he could not make a reduction, which he did. He then said that he had drawn a cheque for the full amount, and that the difference could be placed to his credit. The prosecutors' carman accordingly delivered the goods, and brought back a cheque for 20*l.* 8*s.* 11*d.*, drawn on the Metropolitan Bank (Limited), dated June 12, 1877, in favour of Messrs. Herrings & Co., or order. That cheque was passed through the prosecutors' bankers, and returned marked "account cleared." It had, in fact, been closed since 1872. A warrant was obtained against Butler, and on the 22nd ult. James Pond, 164, apprehended him in the Bethnal Green Police Station. When he told him the charge he said the money was at the bank, and that there was 39*l.* there. At the station he found on him a blank cheque on the Metropolitan Bank. He and Owen Daly, 193, went on the previous day to St. Andrew's Street, and saw Midwinter taking some full bottles out of a case and putting them into a cart. On the next day they went to 78 Chessman Road, Old Ford, and there saw Midwinter and accused him of removing some bottles from Butler's premises in Bethnal Green, and he said he did so because Butler would not pay him his wages, and he wanted some money. He said he knew that it was stealing them. Witness took him into custody and charged him with being concerned with Butler in obtaining the goods by false pretences, to which he replied, "All right, I am quite prepared for it." When he was in the cells he told Daly where he would find some of the bottles, and he and Pond went there and found thirty-five bottles of chemicals, and other goods not relating to the charge. They then went to Worsbip Street Police Court, and obtained a search warrant. At St. Andrew's Street they found more of Messrs. Herrings' goods, and other goods not belonging to them. At 78 Chessman Road they found other goods not relating to this charge. James Setchford, clerk in the Metropolitan Bank (Limited), proved that Butler's account was closed in 1872. The prisoners were committed for trial at the Old Bailey on August 7.

THE CHEMICAL SOCIETY.

Thursday, June 21, 1877.

Dr. GLADSTONE is the chair.

The President announced the following grants from the Research Fund of the society:—Dr. Wright, 50*l.*; Mr. Neisen, 25*l.*; Mr. C. Williams, 25*l.*; Mr. G. Harrow, 10*l.*

The following papers were read:—

"On Diamyl," by H. Grimshaw. This substance was prepared by the action of caesium on amylbromide. It boils at 160°. A chloride and acetate were obtained and investigated. By the action of caustic potash on the acetate two alcohols were formed, boiling at 202° and 212°. On oxidation acids were formed.

"On the Action at a High Temperature of Certain Volatile Metallic Chlorides on Certain Hydrocarbons," by Watson Smith. *a.* The author investigates the action of antimony trichloride and tin tetrachloride on naphthalin, benzene, and toluene. When these substances were severally passed in the state of vapour through red-hot tubes, benzene and tin tetrachloride gave a very large yield of diphenyl in one distillation. Toluene and antimony trichloride gave oils boiling at 270°–320°. Naphthalin and antimony trichloride: 77 gm. of the former yielded 24.2 gm. of yellow crystalline isodinaphthyl; with tin tetrachloride, in addition to a large yield of isodinaphthyl, a reddish oil and a citron-yellow powder were obtained. *b.* Isodinaphthyl, sulpho-acids and salts, with certain other derivatives: the α and β sulpho-acids were prepared, also an oxydinaphthyl, a nitro-substitution product, and a cyanogen derivative. *c.* A new dinaphthyl. In the purification of crude isodinaphthyl by petroleum spirit a fine red solution was obtained: from this the author succeeded in separating three substances melting at 75°, 147°, and 253°. The latter is probably Lossen and Otto's polymeric dinaphthyl; the second is an isomeric dinaphthyl already obtained by Lossen; the first is a new isomeric dinaphthyl.

"On the Action of Alkaline Oxalates on the Earthy Carbonates, and of Solutions of Alkaline Carbonates on the Earthy Oxalates," by Watson Smith. The author, having observed that when a solution of ammonium oxalate was brought into contact with chalk or powdered marble an ammoniacal odour

at once became apparent, has carefully measured the extent of this and similar reactions.

"Note on Thallious Platinocyanide," by R. J. Friswell and A. J. Greenaway. In 1871 one of the authors stated that the above substance was colourless, but that a compound of it with thallious carbonate crystallised in dark-red needles reflecting a green metallic lustre. Carstanjen having confused the two substances and stated that thallious platinocyanide crystallised in blood-red needles, the authors have re-investigated the question and fully confirmed the statements made in 1871.

"On Crystallised Barium Silicate," by E. W. Prevost. Pisani having stated that this substance crystallises in barium hydrate reagent bottles, the author has examined similar crystals, and finds that they consist of barium hydrate.

"A Note on Anethol and its Homologues," by W. H. Perkin. Methylparoxyphenylacrylic acid, when boiled in a bulb-tube, furnishes a distillate consisting of an oil with the formula $C_9H_{10}O$, which, on oxidation, yields apparently anisic acid. Methylparoxyphenylcrotonic acid yields anethol; methylparoxyphenylangelic acid yields a similar substance.

"Note on Persulphocyanic Acid," by R. W. Atkinson, Japan. The author discusses the constitution of the above substance, and after investigating various silver and mercury compounds, concludes that the formula proposed by Glutz is probably correct.

"On the Oxidation Products of the Aloins," by A. Tilden, D.Sc. Barbaloin and Socaloin, when oxidised by potassium dichromate and sulphuric acid, yield a yellowish substance which the author proposes to call aloxanthin, having the formula $C_{13}H_{10}O_8$. This substance, when treated with fuming nitric acid, yields a yellow nitro-acid, having the properties of aloetic acid.

The society then adjourned over the vacation to November 1.



SEMPLE'S AIDS TO "CHEMISTRY."

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Having seen your review of my book, "Aids to Chemistry," in the last number of THE CHEMIST AND DRUGGIST, I cannot let the occasion pass without commenting upon the flagrant inaccuracies contained therein. I fail to recognise any resemblance between an epitome of a scientific work and a box of sardines or a pound of tea.

To quote your exact words, "A student with a paper and pencil and an inquiring turn of mind would get three different lengths for the metre from statements made on pages 15 and 58." Now if your critic will kindly turn to Professor Roscoe's "Lessons in Elementary Chemistry," he will find my statements entirely corroborated. Can he have jumbled the metre with the millimetre? Quoting again: "In the list of errata we are actually told to strike out the correct formula (H_3AsO_4) and insert the false one (H_3AsO_3)." This is in reference to arsenious acid. May I ask your reviewer upon whose authority he asserts that the correct formula for arsenious acid is H_3AsO_4 . It is absolutely impossible to obtain any other formula than H_3AsO_3 by the addition of three molecules of water (H_2O) to arsenious anhydride (As_2O_3). I have most carefully examined "the page to which we are referred," and find upon the second line of the page that H_3AsO_3 is given as the formula for arsenious acid. This is absolutely wrong, and therefore demands the correct formula, as given in my page of errata.

With regard to terming the work a cram, I have not the slightest objection. For many years I have been engaged in preparing students for medical examinations, chemistry, perhaps, forming my chief subject, and I have constantly been impressed by the difficulty exhibited by students in acquiring even a moderate knowledge of the subject. Many had not the application, and the ability of others was insufficient to accept the amount given in large works. I therefore compiled a series of notes for their use, and have been told from many quarters that these were found of service. These "Aids to Chemistry" contain all the leading facts regarding the non-metallic elements, and in

this portion of the subject, to pluck a student who knew the whole well would be both unfair and unreasonable. It is not intended nor desired that students should neglect large works upon any subject; but it is far better to concentrate the attention upon leading facts, and to learn a little well than to obtain a diffuse knowledge which at examinations will not prove of the slightest value. It is the duty of a critic to point out errors, not to create them, and I must request you to insert this letter in your journal for my justification.

I remain, sir, yours truly,
C. E. ARMAND SEMPLE.

[We may reply to Mr. Semple's letter in our next. At present the book on which the review was written is not at hand.—ED. CHEMIST AND DRUGGIST.]

Trade Notes.

MR. G. STRAWSON has purchased the business of Mr. E. Davies at Bishop's Castle.

MR. WILLIAM ALLEN PEARCE and Mr. William Derrick have formed a partnership to reconduct the old-established business of Pearce & Co., druggists' sundriesmen and surgical instrument makers, of Bristol.

MESSRS. SOUTHALL BROS. & BARCLAY have been awarded a gold medal for their Alcod liver oil exhibited at the South African International Exhibition.

MESSRS. W. J. BUSH & Co., of Artillery Lane, are now carrying on the soap and perfumery business formerly conducted by Messrs. John Richardson & Co., of Bishopsgate Street Without. Messrs. Bush have purchased the stock, goodwill, formulae, &c.

MR. WILLIAM ARMSTRONG, of 86 Great Tower Street, has been appointed agent for the Elisabeth and Sainte-Marie Natural Vichy Waters, the springs of which are situated at Cusset, near Vichy, and have special medicinal virtues.

MESSRS. R. H. MILLARD & SONS, who have built up a large patent medicine and sundry business within the past ten years, have now removed from 44 Barbican to more commodious premises at 40 Charterhouse Square.

WM. EDWARDS & SON, the patent medicine house whose firm has so long been associated with Old Change, have removed to 157 Queen Victoria Street. The old firm must feel a little stranger in this bran new locality.

DR. DELORME's Ama Rosa Tooth Paste, prepared by Nerwich & Co., of Red Lion Square, London, is a very pleasant preparation to use, and is peculiar for being contained in collapsible cases similar to the perfume fountains, Lloyd's "Euxes's," &c., a method very suitable for tooth paste. It is of a thinner consistence than tooth pastes generally.

THE DAUGHTER OF THE LATE JOHN BOND groans under the weight of still another gold medal, the newest one being awarded by the authorities of the South African International Exhibition at Cape Town. The "daughter" is open to establish a depot for her ink in Central Africa, but the natives fail to see anything particularly wonderful about "indelible black."

THE NORTH BRITISH CHEMICAL COMPANY (Limited) has been formed under the management of Mr. E. C. C. Stanford, F.O.S., of Glasgow, to carry on the important business founded and conducted by the late British Seaweed Company. The company is now supplying iodine, iodide, and bromide of potassium and other chemicals manufactured at its works on the Scottish coast. They have offices in Hope Street, Glasgow, and at 12 Mark Lane, London, the latter being managed by Mr. George Pugh, one of the partners in the concern.

Cash offers wanted. Prices given are the cost prices.—Mohr's burette (pinch cock and glass jet complete), contents 100 c.c., No. of divisions 600, 8s.; wooden support for two ditto, 4s.; 3 brass pinch cocks, 1s. 6d.; Erdman's float, 1s. 6d.; weights (new) in mahogany box, 50 grammes to milligramme, 35s.; hydrometer in tin case, 2s. 6d.; pipettes—25 c.c. 1s. 3d., 10 c.c. 10d.; litre flask, stoppered, 3s.; glass lipped cylinder, with foot, containing 1,000 c.c., 100 divisions, 5s.; large Liebig's condenser, glass, iron stand, 21s.; two Horseley's stoppered milk analysis tubes, complete, with pamphlet, 3s. 6d.; Smee's battery and coil, complete in box, 30s.; intensity coil, small, strong, 18s. "Alpha," care of Field, Chemist, 39 South Clerk Street, Edinburgh.

Sponge case, as fig. 92, 5l.; dispensing screen, 6 ft. 6 long, a glass case at each side, looking-glass centre, with marble slab in front, surmounted by handsome tablets, "Dispensing Department," with looking-glass to back of cases, very handsome, a bargain, 9l.; a 6-ft., as Maw's 164, with looking-glass back, 7l. 10s.; also one 5 ft., 6l.; an upright case, to stand on floor in front of counter, with marble top, glass doors and sides, 4 ft. 6 long, 3 ft. high, 12 in. deep, 5l.; soda-water stand, 50s.; a 3 ft. 6 counter case, plate-glass, fig. 22, 70s.; a 4 ft. 8 in. ditto ditto, as fig. 16, 65s.; a 5 ft. 2 in., as fig. 96, 90s.; a 6 ft. 2 in., as fig. 99, one sheet of plate-glass, 7l. 10s.; a 4 ft., as fig. 101, 95s.; a 6 ft., as 105, 7l. 10s.; a 6-ft. bent plate-glass counter case, 15 in. wide, 11 in. deep, 6l. 10s., one sheet of glass; toothbrush case, 25s.; a glass case, as fig. 81, 16 by 12, 7s. 6d.; a number of other glass cases for counter and wall, very cheap; a desk and case, as fig. 21, looking-glass back, carved work on top, 75s. Natali, 213 Old Street.

12 ft. long handsome mahogany shop drawers, with lockers under, shelving, cornice, and looking-glass pilasters, forming complete fitting, equal to new, 21l. 10s.; 10 ft. long ditto, similar to above, equal to new, 17l. 10s.; 2 ft. 8 long, 3 ft. 9 long, 4 ft. long, 6 ft. long, 7 ft. 3 long, 7 ft. 6 long, 10 ft. long, 12 ft. long, 16 ft. long nests mahogany shop drawers, with gold labels, 12 ft. long nest mahogany stained, gold labelled, shop drawers, 4 ft. 4 long wall case, 40s.; 3 ft. 8 long mahogany wall case, 4 ft. 6 high, 5l. 10s.; 6 ft. long mahogany wall case, with cupboards under and mirror back, similar to 204 Maw's, equal to new, 17l. 10s.; 6 ft. 7 long ditto, with mirror pilasters, &c., equal to new, 16l. 10s.; 9 ft. long mahogany wall case with cupboard under, similar to 205 Maw's 25l.; 9 ft. 9 long ebonised wall case with plinth under, 7 ft. 6 high, equal to new, 15l.; 8 ft. long Spanish mahogany wall case, with cupboards under, similar to Treble's 47, equal to new, 21l.; superior Spanish mahogany air-tight wall-case, enclosed by 14 plate-glass doors, fitted 2 tiers, plate-glass shelves, and 2 wood ditto on moveable bronzed brackets, looking-glass back, with moulded cornice and plinth, 20 ft. long, 8 ft. 6 high, elaborately finished, cost nearly 250l., price 120l.; handsome 6 ft. 8 long mahogany fronted dispensing counter, with plate-glass screen on top, 6 ft. 6 long, and 5 ft. 7 long, handsome dispensing screens with mirror backs, cases at each end, &c., as 164 Maw's and 136 Treble's, 2 ft. 2 long upright counter case, 3 ft. high, 40s.; 2 ft. 6 long, 2 ft. 3 high ditto, nearly new, 55s.; tooth brush case, similar to 72 Maw's, 56s.; 2 ft. 6 long bent glass case, as 16 Maw's, 30s.; 2 ft. 9 long, 14 in. wide, 11 in. high, as fig. 8 Maw's, nearly new, 75s.; 4 ft. long Spanish mahogany counter case, as 107 Treble's, 5l.; plate-glass case and desk, 2 ft. 6 long, nearly new, 80s.; 3 feet 6 inches long, 2 feet wide, ebonised plate-glass counter case, as 97 Maw's, 75s.; 20 mahogany counter cases, all kinds, from 5s. each; 500 gold labelled shop bottles, 4, 8, 10, 20, 32, 40, 60 oz., 7s., 8s., 8s. 6d., 9s., 14s., 15s., 16s. per doz.; 6 doz. 1-gall. black store bottles, japan caps, 18s. doz.; quantity second-hand ointment jars, with gold labels, all sizes, 2 doz. each, 4-lb. 1-lb., ½-lb., marone shop with gilt mouldings, as fig. 1 Maw's; 18 new specio jars, with gilt glass covers, elegantly labelled, all sizes, from 18 up to 32 in., from 27s. 6d. each; pair new specio jars, with gilt glass covers, 30 in. high, royal arms, &c., as 1 Maw's, including mahogany stands, 10l.; 20 jubbe jars, as fig. 2 Maw's, 2s. 3d. each; quantity show jars, gilt covers, elegantly labelled, as fig. D Maw's, from 6s. each. Lloyd Rayner, 333 Kingsland Road, London, N.

Two 8-gal. carboys and stands, 40s.; 3 cylinder-shaped ditto, 4-gal., 6s. each; 50 smaller, from 4s. 6d. each; 12 dozen 8 and 10 oz. shop bottles, 5s. dozen; 1 dozen 50-oz. syrups, blue plugs, labelled, 12s.; 1 dozen quart ditto, 9s. 6d.; 1 dozen blue; 40 wide-mouth shop bottles, labelled, 12s.; 20 black stock bottles, 1½-gal., shield labels, caps, equal to new, 1s. 8d. each; a number of white ointment jars, 4 and 6 lbs., 1s. 9d. each; 14 2-lb. ditto, 1s. each; a number of blue jars, japanned covers, 1s. 4d. each; a pair of specio jars, Royal Arms, gold covers, 80s., a bargain, worth double; a pair ditto, very elaborately labelled, 70s.; 10 ½-lb. pink jars, 10d. each; a 12 5-grain pill machine, 9s.; a 24 5-grain ditto, 13s.; a 24 3 and 5 grain reversible pill machine, 25s.; a 1½-gal. tincture press, fig. 2, 35s.; a very elaborate dental case, 9l.; several small nests of drawers, shelving, counters, &c. Natali, 213 Old Street, E.C.

5-ft. counter, 30s.; 8-ft. counter, 50s.; 12-ft. counter, 90s.; handsome, equal to new, French polished counters, 8 ft. 6 and 10 ft. 3 long, 6l. 10s., 7l. 15s. each; 8 ft. 6 long mahogany-fronted counter, 8l. 17s. 6d., equal to new; 10 ft. long Spanish mahogany fronted counter, with return end; 12 ft. long mahogany counter, equal to new, 8l. 10s.; 2 doz. and 3 doz. 5 and 2-gr. pill machines; 1 and 2-qt. tincture presses; tin water baths, as fig. A Maw's; retort, vital, and test tube stands; mortars and pestles, all kinds and sizes; handsome outside shop lamp, with solid ruby lenses; pillar street lamp; 2 mahogany shop chairs; 4 step shop ladders, 3 doz. 1s. boxes; breast exhausters, 6s. doz.; 1 doz. 2s. 9d. Parr's pills, 21s.; leech aquarium, 13 in., as Maw's 135, 8s.; 2 gross 1-oz. round stoppered ess. bottles, 18s. gross; 1 gross 2-oz. round ess. bottles, as Maw's 23, 12s. gross; 2 gross ½ and 1-oz. glass syringes, 1s. 8d. and 3s. doz.; two plate-glass mirrors, in ebonised frames, 2 ft. 9 square, 35s. each; 2 pairs pillar counter scales, as fig. 1 Maw's. Lloyd Rayner, 333 Kingsland Road, London, N.

FORMULÆ.

Rose tooth powder, otto, 1d. per oz.; will send receipt for twelve stamps. 22, 56.

"Scarlet wash," renders faded gents' red coats, officers' scarlet uniforms, bright and clean; receipt, 3s. Walker, 13 Armfield Row, Dundee.

An eminent V. S. will forward prescriptions for colic draughts and cough powders for horses, 5s. each. Apply, R. H. Dyer, Glentworth Street, Limerick, Ireland.

Receipt for Reynolds' specific, certain cure for white rush in calves, 5s.; receipt for making rabbits in holes bolt, 3s. 6d. Walker, Farmer, Cowrie, Greenlaw.

Herbarium of indigenous plants, including the officinal, mounted, classed, and named, 5s.; recipe for excellent lavender water, 1s. 6d.; 20 choice recipes for horse and cattle medicines, 5s. "Chemist," care of Mr. Filtness, Rotherfield, Sussex.

To Chemists.—90 choice perfumery and other receipts, consisting of perfumes, pomades, sachet powders, hair washes, mouth washes, cosmetics, &c., only 2s. 6d. each, or ten selected 1l. 1s.; list on application; perfumes cost about 6s. per imperial pint, equal to any of the first makers', and guaranteed to give the highest satisfaction. "Pharmacist," 332 Lodge Road, Birmingham.

WANTED.

Good second-hand dental chair. J. Geldard, Chemist, St. Austell.

A second-hand 2-grain pill machine, in good order, to cut 36 pills or more. G. Kershaw, Hitchin.

Piessé's "Art of Perfumery," last English edition. Full price offered for perfect copy. Mason, Pharmacist, Gosport.

A gun-metal pessary mould. Particulars and price to Buck, Chemist, 192 Breck Road, Liverpool.

The Chemist and Druggist for December 15, 1860. 44a Cannon Street, London.

Carpenter's "Animal Physiology." State edition. Buck, Chemist, Middlesborough.

ADDRESSES AND INFORMATION WANTED.

The present address of Mr. J. St. Clair Beattie, late of Ebenezer Cottage, Kennington, and 10 Basinghall Street, and recently employed at the Birkenhead Barytes Company (Limited), Cathcart Street, Birkenhead. 60/124.



THE slight indication of an improving export trade which the Board of Trade returns for May brought to light must, we fear, be regarded as accidental, the past month having failed to maintain the advantage. In May there was an advance of 405,635*l.* over the May of 1876. June, however, compares with its corresponding predecessor of 1876 by 542,601*l.* to its advantage, the monthly totals being 15,305,659*l.* this, and 15,848,260*l.* last June.

During the first six months of this year the declared value of the exports was 3,975,929*l.* less than in the corresponding portion of last year, and 14,609,220*l.* less than in the first six months of 1875, as shown by the following figures:—

Six months ending June.		
1877	1876	1875
£	£	£
95,234,130	99,210,059	109,843,350

The imports meanwhile continue to increase, and there is a fair possibility, if both imports and exports continue in the same direction as each now moves up to December, that the grand total of the former for the year will actually double that of the latter. This fact is sufficiently amazing to be worthy of the careful investigation of our ablest economists.

Another indication of the return of flatness after a trifling impetus is the recent reduction of the bank rate of discount from 3 to 2½ per cent., followed by a return to the old price of 2 per cent. on the 12th inst. This, of course, shows that the demand for money occasioned by the development of business has fallen off.

The demand for heavy chemicals is not improving. Soda crystals have slightly strengthened in value, and are now quoted at 85*s.* instead of 82*s.* 6*d.* as last month. A rather freer demand from the United States has probably occasioned this slight advantage, but that seems to be due to an anticipation of increased rates for freight. The reduction in the output of coal at some of our Northern collieries had also some effect in strengthening the market. Bleaching powder is a trifle weaker, and is now bought in London at 6*s.* 3*d.* per cwt. landed. Sulphate and carbonate of ammonia have been dealt in, and the former has advanced from 19*l.* 10*s.* to 20*l.* per ton; the latter firm at 5*d.* to 5½*d.*, according to packages. Saltpetre continues dull, and has lost another 1*s.* per cwt. Cream of tartar has been rather more abundant, and is quoted at an average of 102*s.* Citric and tartaric acids are a trifle stronger, and though the demand is not active just now, holders seem pretty confident and are not pushing sales. For citric 2*s.* 9*d.* is asked, though contracts to deliver within the next month or two have lately been made at 2*s.* 8*d.*

Iodine is dull and unsaleable at quoted prices. Quinine is 1*s.* lower than a month ago, partly in consequence of a more abundant supply of barks, and partly because speculative holders seem to have judged that the article has reached its highest. No doubt, too, the demand has been checked to a considerable degree by the rise in price, and the virtues of other cinchona alkaloids have probably received better attention than when quinine was at half its present quotation. With a great war in progress in unhealthy climates, the end of which is by no means visible, and with a curious uncertainty about the future supply of the bark, we can be by no means assured that the product is really on the way towards a more moderate price. At any rate, supplies of good quinine-yielding

cinchonas are bought readily enough though at a slightly cheaper rate.

Respecting opium, no importing firm write that the first parcels of the new crop have just come on the market. They are of very fine quality, and should the drafting of the peasants into military service not diminish too much the hands employed in gathering, we expect a good crop of about 8,000 to 10,000 chests. The first sales have taken place at 15*s.* 9*d.* to 16*s.* per lb. English, net f.o.b. Constantinople, for small well-dried pads of good shape. Our authority adds, "An advance is expected." We do not exactly see why. At any rate, there now seems every prospect that the crop will get safely into commerce.

The harvest of otto of roses, it is reported, is just finished, and the result is unsatisfactory, being 220,000 meticals, against 360,000 ditto in 1876, 430,000 ditto in 1875, 320,000 ditto in 1874, 600,000 ditto in 1873. If this be true, prices which are not definitively settled will run high.

There has been a fair demand for drugs at the sales. At the most recent, on the 12th inst., aloes were bought readily at good prices. Cape good hard lump made 54*s.*; common qualities from 37*s.* to 48*s.*; fair qualities of socotrine made from 7*l.* 2*s.* 6*d.* to 10*l.* 10*s.*; Barbados fair, 8*l.* Balsam capivi, red tinted, was sold 1*s.* 6½*d.*; other bought in at 1*s.* 8*d.* Cardamoms would make good prices for finest, but other samples are somewhat neglected. Colocynthis apple, good, from St. Petersburg, sold at 1*s.* 11*d.* Four casks of oxalic acid were sold at 4½*d.*, after one had gone for 4¼*d.* Santonine was bought in at 2*s.* 6*d.* Ipecacuanha was lower, selling at 4*s.* 8*d.* to 4*s.* 10*d.* Norwegian cod-liver oil was sold at 4*s.* 4*d.* and 4*s.* 5*d.*, better samples bought in at 5*s.* and 5*s.* 6*d.*; various qualities of Newfoundland bought at 4*s.* to 5*s.* 6*d.* Of 11 cases China cantharides offered 1 was sold for 2*s.* 10*d.*, the remainder held at 3*s.*; Russian, 4*s.* 9*d.* The stock is small and higher prices are expected. Some Spanish cream of tartar was bought in at 102*s.*; French at 100*s.* Cinchona barks were sold at moderate prices.

The public sales of isinglass on the 10th inst. were less extensive, and, with a good demand for most kinds, the bulk was sold. Bombay sold at full rates for both tongue and bladder pipe, to some advance for fine new tongue; cake also sold well. Penang tongue sold at previous rates to 3*d.* advance; leaf rather dearer, but cake easier; Brazil sold, with active competition, at an advance ranging from 2*d.* for fine to 5*d.* for medium kinds; West India was also higher.

The quarterly sales of indigo took place a week ago, and were marked by firmness. Unfavourable accounts of the new crop had been received from Calcutta, to the effect that the drought was seriously injuring the plant. Consequently, holders are demanding an advance over April rates, although since that date a fall of 3*d.* per lb. has occurred. At the sales just concluded an advance of 2*d.* for Bengals and Oudes was obtained.

A great deal of animation has been manifest in the shellac sales, orange and garnet having been in especial demand. This is not due to any present falling off in the stock, which is very heavy, but to advices from Calcutta, which seem to be relied upon, that the supply will now be shorter. Large quantities have been sold at an advance of from 3*s.* to 5*s.* per cwt.

Linseed oil had been dull up till the early part of this month, when it had touched 26*l.* 15*s.* Since then, however, a reaction has set in, and a recovery of 2*l.* over lowest prices has been reached. Rape oil is also firm, and somewhat dearer. Olive moves but slightly, notwithstanding the persistent efforts of Italian speculators to force up the price. Coconut oil is firmly held, Cochin at 42*l.* 10*s.*, and Ceylon at 38*l.* Palm oil is rather lower. Turpentine still arrives more abundantly than it is bought, and a further decline is to be noted. It is now selling at 23*s.* to 23*s.* 3*d.* Petroleum is dull at 10¼*d.*

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lano for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

	1877.		1876.	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic per lb.	0 3½ to	0 0	0 3½ to	0 0
Citric "	2 8½ ..	2 9	2 8½ ..	0 0
Hydrochloric per cwt.	5 0 ..	7 0	4 0 ..	7 0
Nitric per lb.	0 4½ ..	0 0	0 4½ ..	0 0
Oxalic "	0 4½ ..	0 0	0 4½ ..	0 0
Sulphuric "	0 0½ ..	0 1	0 0½ ..	0 1
Tartaric crystal ..	1 5½ ..	1 6	1 4½ ..	0 0
powdered ..	1 6 ..	0 0	1 5 ..	0 0
ANTIMONY ore per ton	240 0 ..	300 0	280 0 ..	300 0
crude .. per cwt.	37 0 ..	0 0	37 6 ..	42 0
star "	47 0 ..	48 0	64 0 ..	65 0
ARSENIC , lump "	25 6 ..	26 0	27 0 ..	28 0
powder "	8 6 ..	8 9	10 9 ..	11 6
BRIMSTONE , rough .. per ton	110 0 ..	0 0	125 0 ..	130 0
roll .. per cwt.	9 6 ..	0 0	10 0 ..	10 3
hour "	11 9 ..	13 6	13 0 ..	14 0
IODINE , dry per oz.	0 10 ..	0 10½	0 5½ ..	0 6
IVORY BLACK , dry .. per cwt.	8 6 ..	0 0	8 6 ..	0 0
MAONESIA , calcined .. per lb.	1 10 ..	0 0	1 8 ..	0 0
MERCURY per bottle	145 0 ..	0 0	170 0 ..	0 0
MINIUM , red per cwt.	23 3 ..	24 3	24 0 ..	24 6
orange ..	35 0 ..	0 0	37 0 ..	0 0
PRECIPITATE , red .. per lb.	3 9 ..	0 0	4 6 ..	0 0
white ..	3 8 ..	0 0	4 5 ..	0 0
PRUSSIAN BLUE ..	0 0 ..	0 0	0 0 ..	0 0
SALTS—				
Alum per ton	142 6 ..	147 6	145 0 ..	155 0
powder "	157 6 ..	160 0	160 0 ..	165 0
Ammonia:				
Carbonate per lb.	0 5 ..	0 5½	0 5 ..	0 5½
Hydrochlorate, crude,				
white per ton	650 0 ..	700 0	560 0 ..	700 0
British (see Sal Am.)				
Sulphate per cwt.	35 0 ..	400 0	370 0 ..	380 0
Argol , Cape per cwt.	75 0 ..	90 0	80 0 ..	87 0
Red "	67 0 ..	72 0	70 0 ..	75 0
Oporto, red ..	33 0 ..	34 0	33 6 ..	34 0
Sicily "	0 0 ..	0 0	0 0 ..	0 0
Asbes (see Potas and Soda)				
Bleaching powd. per cwt.	6 3 ..	0 0	6 6 ..	0 0
Borax , crude "	20 0 ..	36 0	30 0 ..	48 0
British refined ..	39 0 ..	40 0	42 0 ..	0 0
Calomel per lb.	3 4 ..	0 0	4 0 ..	0 0
Copper:				
Sulphate per cwt.	21 6 ..	22 0	23 6 ..	24 0
Copperas, green .. per ton	60 0 ..	65 0	65 0 ..	70 0
Corrosive Sublimate p. lb.	2 9 ..	0 0	3 5 ..	0 0
Cr. Tartar , French, p. cwt.	101 6 ..	102 6	93 0 ..	0 0
brown ..	90 0 ..	0 0	77 0 ..	82 6
Epsom Salts per cwt.	4 3 ..	5 3	5 3 ..	7 0
Glauber Salts "	3 6 ..	4 6	4 6 ..	5 6
Lime:				
Acetate, white, per cwt.	11 0 ..	20 0	11 0 ..	20 0
Magnesia: Carbonate ..	47 6 ..	0 0	45 0 ..	0 0
Potasb:				
Bicarbonate per lb.	0 4½ ..	0 4½	0 4½ ..	0 0
Carbonate:				
Potashes, Canada, 1st				
sort per cwt.	25 0 ..	0 0	24 0 ..	0 0
Pearlshes, Canada, 1st				
sort per cwt.	39 0 ..	0 0	28 6 ..	0 0
Chlorate per lb.	0 8½ ..	0 8½	0 8½ ..	0 8½
Prussiate "	0 11 ..	0 11½	0 11 ..	0 0
red "	2 1 ..	2 2	3 2 ..	3 3
Tartrate (see Argol and Cream of Tartar)				
Potassium:				
Chloride per cwt.	0 0 ..	0 0	7 0 ..	0 0
Iodide per lb.	13 0 ..	0 0	7 6 ..	0 0
Quinine:				
Sulphate, British, in				
bottles per oz.	15 0 ..	15 6	7 2 ..	7 3
Sulphate, French ..	14 6 ..	15 0	6 5 ..	0 0
Sal Acetos per lb.	0 7 ..	0 7½	0 7½ ..	0 0
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	44 0 ..	45 0
Saltpetre:				
Bengal, 6 per cent. or				
under per cwt.	23 0 ..	24 0	18 0 ..	18 6
Bengal, over 6 per cent.				
per cwt.	22 0 ..	22 6	17 6 ..	18 0
British, refined ..	26 0 ..	27 6	21 6 ..	22 9
Soda: Bicarbonate, p. cwt.	11 0 ..	11 3	10 9 ..	11 0
Carbonate:				
Soda Ash .. per deg.	0 1½ ..	0 1½	0 1½ ..	0 0
Soda Crystals per ton	85 0 ..	0 0	80 0 ..	0 0
Hyposulphite, per cwt.	0 0 ..	0 0	0 0 ..	0 0
Nitrate per cwt.	14 6 ..	14 9	11 8 ..	11 6
SUGAR OF LEAD , White cwt.	37 0 ..	38 0	40 0 ..	0 0
Brown, cwt.	27 0 ..	0 0	27 0 ..	0 0
SULPHUR (see Brimstone)				

	1877.		1876.	
	s. d.	s. d.	s. d.	s. d.
VERDIGRIS per lb.	1 1 to	1 5	1 1 to	1 5
VERMILION , English ..	2 10 ..	0 0	3 2 ..	0 0
China ..	2 9 ..	0 0	0 0 ..	0 0
DRUGS.				
ALOES , Hepatic per cwt.	70 0 ..	180 0	80 0 ..	160 0
Socotrine ..	85 0 ..	220 0	65 0 ..	205 0
Cape, good ..	49 0 ..	54 0	89 0 ..	44 0
Inferior	42 0 ..	48 0	30 0 ..	38 0
Barbadoes ..	50 0 ..	180 0	45 0 ..	180 0
AMBERGRAS , grey oz.	75 0 ..	86 0	54 0 ..	65 0
BALSAM—				
Canada per lb.	1 1 ..	1 2	1 3 ..	0 0
Capivi "	1 8 ..	0 0	2 0 ..	2 8
Peru "	6 0 ..	6 6	4 6 ..	5 0
Tolu "	6 0 ..	6 6	6 0 ..	6 6
BARKS—				
Canella alba per cwt.	21 0 ..	28 6	25 0 ..	27 0
Cascarilla "	16 0 ..	20 0	16 6 ..	28 0
Peru, crown & grey per lb.	1 6 ..	2 10	1 2 ..	2 9
Callisaya, flat ..	2 0 ..	6 6	2 0 ..	4 5
quill ..	2 6 ..	8 6	2 0 ..	4 6
Carthagea ..	3 8 ..	4 8	1 5 ..	2 2
Columban ..	1 6 ..	5 8	1 0 ..	8 4
E. 1.	1 6 ..	6 6	2 0 ..	6 0
Pitayo "	0 6 ..	1 6	0 7 ..	1 9
Red "	2 3 ..	5 0	1 9 ..	4 6
Buchu Leaves ..	0 2½ ..	1 6	0 1 ..	1 1
CAMPOR , China .. per cwt.	92 6 ..	95 0	62 6 ..	63 6
Japan ..	97 6 ..	100 0	65 0 ..	68 0
Refin. Eng. per lb.	1 3 ..	1 4	1 0 ..	1 1
CANTHARIDES "	2 9 ..	5 6	2 6 ..	3 6
CHAMOMILE FLOWERS p. cwt.	50 0 ..	200 0	29 0 ..	50 0
CASTOREUM per lb.	9 0 ..	80 0	6 0 ..	26 0
DRAGON'S BLOOD , lp. p. cwt.	100 0 ..	260 0	110 0 ..	200 0
FRUITS AND SEEDS (see also Seeds and Spices).				
Anise, China Star per cwt.	92 0 ..	100 0	85 0 ..	102 6
Spanish, &c. ..	30 0 ..	35 0	26 0 ..	40 0
Beans, Tonquin ... per lb.	1 9 ..	2 7	1 7 ..	2 6
Cardamoms , Malabar				
good ..	5 0 ..	5 11	3 6 ..	4 4
inferior ..	1 6 ..	4 5	0 10 ..	3 5
Aleppy ..	3 2 ..	4 4	2 0 ..	3 9
Madras ..	2 2 ..	3 10	1 9 ..	3 3
Ceylon ..	3 6 ..	5 0	4 0 ..	5 2
Cassia Fistula per cwt.	10 0 ..	82 0	8 0 ..	14 0
Castor Seeds ..	5 0 ..	10 6	5 0 ..	10 6
Cocculus Indicus ..	9 0 ..	11 0	12 0 ..	13 0
Colocyntb, apple .. per lb.	0 0 ..	0 0	0 6 ..	0 11
Croton Seeds per cwt.	30 0 ..	0 0	32 6 ..	0 0
Cubebbs ..	27 0 ..	28 0	30 0 ..	0 0
Cumin ..	11 0 ..	23 0	15 0 ..	24 0
Dividivi ..	12 0 ..	18 0	10 0 ..	15 0
Fenugreek ..	8 0 ..	11 0	15 0 ..	22 0
Guinea Grains ..	0 0 ..	0 0	23 0 ..	0 0
Juniper Berries ..	8 0 ..	10 0	8 0 ..	10 0
Nux Vomica ..	13 0 ..	15 9	8 6 ..	13 0
Tamarinds, East India ..	10 0 ..	15 6	13 0 ..	16 0
West India ..	16 0 ..	23 0	13 0 ..	21 0
Vanilla , large per lb.	19 0 ..	27 0	30 0 ..	50 0
inferior ..	12 0 ..	18 0	13 0 ..	28 0
GINGER , Preserved, per lb.	0 5 ..	0 7	0 5½ ..	0 8
HONEY , Chili per cwt.	32 0 ..	42 0	43 0 ..	46 0
Jamaica ..	0 0 ..	0 0	36 0 ..	53 0
Australian ..	0 0 ..	0 0	0 0 ..	0 0
IPECACUANHA per lb.	4 10 ..	6 0	3 10 ..	4 6
ISINGLASS , Brazil ..	3 0 ..	5 0	2 0 ..	5 1
Tongue sort ..	3 6 ..	5 6	2 3 ..	5 0
East India ..	2 2 ..	5 6	0 9 ..	4 7
West India ..	4 1 ..	4 8	3 6 ..	4 3
Russ. long staple ..	8 0 ..	15 0	9 0 ..	12 6
inferior ..	0 0 ..	0 0	0 0 ..	0 0
Simovia ..	2 2 ..	3 3	8 0 ..	3 6
JALAP , good "	0 8 ..	0 10½	0 7 ..	0 9
infer. & stems ..	0 7½ ..	0 7½	0 6 ..	0 8
LEMON JUICE per degree	0 1 ..	0 1½	0 1 ..	0 1½
LIME JUICE per gall.	0 0 ..	0 0	1 3 ..	1 8
LIQUORICE , Spanish per cwt.	34 0 ..	39 0	0 0 ..	0 0
Liquorice Root ..	0 0 ..	0 0	13 0 ..	35 0
MANNA , flaky per lb.	0 0 ..	0 0	5 6 ..	6 0
small ..	0 0 ..	0 0	1 6 ..	1 9
MUSK , Pod per oz.	15 0 ..	47 0	15 0 ..	42 0
Grain ..	40 0 ..	50 0	87 0 ..	60 0
OILS (see also separate list)				
Almond, expressed per lb.	1 4 ..	0 0	1 5 ..	0 0
Castor, 1st pale	0 4½ ..	0 4½	0 3½ ..	0 0
second ..	0 4 ..	0 4½	0 3½ ..	0 3½
Cod Liver per gall.	4 6 ..	7 6	5 6 ..	7 6
Croton per oz.	0 2½ ..	0 0	0 2½ ..	0 0
Essential Oils:				
Almond per lb.	20 0 ..	0 0	20 0 ..	0 0
Anise-seed ..	6 6 ..	6 9	7 0 ..	0 0
Bay per cwt.	0 0 ..	0 0	65 0 ..	70 0
Bergamot per lb.	10 0 ..	15 0	10 0 ..	15 0
Cajeput per bottle	3 0 ..	3 6	2 9 ..	3 0
Caraway per lb.	9 0 ..	9 3	9 0 ..	9 3
Cassia ..	3 7 ..	3 8	4 2 ..	0 0
Cinnamon per oz.	2 6 ..	6 0	2 6 ..	6 6
Cinnamon-leaf ..	0 2½ ..	0 3	0 2½ ..	0 3
Citronello ..	0 1½ ..	0 0	0 1½ ..	0 2
Clove per lb.	8 6 ..	0 0	8 9 ..	0 0
Juniper ..	0 0 ..	0 0	0 0 ..	0 0
Lavender per lb.	1 8 ..	7 0	1 8 ..	7 0
Lemon ..	7 0 ..	9 6	7 0 ..	9 6
Lemongrass per oz.	0 2½ ..	0 0	0 2½ ..	0 0

1877.				1876.			
Essential Oils, continued:—							
	s. d.	s. d.		s. d.	s. d.		
Neroli	3 0	6 6		3 0	6 6		
Nutmeg	0 5½	0 5½		0 7	0 7½		
Orange	6 0	9 0		6 0	9 0		
Otto of Roses	16 0	22 0		13 0	25 0		
Patchouli	2 0	3 6		2 0	3 6		
Peppermint:							
American	13 0	14 3		15 0	16 0		
English	34 0	35 0		32 0	34 0		
Rosemary	2 0	2 6		2 0	2 6		
Sassafras	2 3	2 6		2 3	2 6		
Spearmint	12 0	15 0		14 0	16 0		
Thyme	0 0	0 0		0 0	0 0		
Mace, expressed	0 6	0 10		0 6	0 10		
Opium, Turkey	21 0	22 6		19 6	21 6		
inferior	10 0	18 0		9 0	18 0		
QUASSIA (bitterwood) per ton	100 0	130 0		100 0	140 0		
RHUBARB, China, good and fine	2 6	3 6		4 10	5 7		
Mid. to ord.	0 9	2 0		0 9	3 3		
Dutch Trimmed ..	0 0	0 0		0 0	0 0		
ROOTS—Calumba	32 0	54 0		25 0	28 0		
China	30 0	32 0		19 0	24 0		
Chiretta	0 2½	0 3		0 3½	0 4		
Galangal	22 0	26 0		19 0	22 0		
Gentian	24 0	24 0		23 0	24 0		
Hellebore	0 0	0 0		0 0	0 0		
Orris	26 0	75 0		26 0	75 0		
Pellitory	70 0	76 0		0 0	0 0		
Pink	0 0	0 0		0 0	0 0		
Rhatany	0 4	1 0		0 4	0 8		
Seneca	3 6	4 0		3 6	0 0		
Snake	0 6	0 6½		0 6	0 7		
SAFFRON, Spanish ..	33 0	37 0		24 0	36 0		
SALEP	0 0	0 0		0 0	0 0		
SARSAPARILLA, Lima per lb.	0 5	0 7		0 6	0 8		
Guaquil	1 10	2 2		0 9	1 11		
Honduras	1 10	1 11		1 3	1 7		
Jamaica	2 5	2 9		1 9	3 0		
SASSAFRAS	0 0	0 0		0 0	0 0		
SCAMMONY, Virgin ..	24 0	30 0		24 0	30 0		
second & ordinary ..	6 0	22 0		6 0	22 0		
SENA, Bombay	0 1	0 4		0 1	0 4		
Tionivelly	0 2	1 6		0 2	1 0		
Alexandria	0 5	2 0		0 5	2 8		
SPERMACETI, refined ..	1 3	1 4		1 4	0 0		
American	1 0	1 1		1 2	0 0		
SQUILLS	0 1½	0 3½		0 3	0 4		
GUMS.							
	£ s.	£ s.		£ s.	£ s.		
AMMONIACI drop .. per cwt.	2 2	2 6		1 13	3 10		
lump ..	0 17/6	1 14		1 5	1 10		
ANDRI, fine washed ..	11 0	12 15		11 0	12 10		
bold scraped ..	9 15	10 15		9 15	10 15		
sorts	6 15	9 10		6 0	9 5		
dark	4 0	6 19		3 0	6 10		
ARABIC, E.L., fine							
pale picked ..	3 0	3 17		6 19	3 11		
sorts, md. to fin. ..	2 5	2 14		2 10	3 0		
garblings ..	1 7	2 0		1 2	2 3		
TURKEY, pick. gd. to fin. ..	6 0	9 10		6 0	9 0		
second & inf. ..	3 0	5 15		2 10	5 10		
in sorts ..	2 10	3 10		1 15	2 5		
Gedda ..	1 16	3 8		1 3	1 6		
BARBARY, white ..	0 0	0 0		0 0	0 0		
brown ..	1 16	1 19		1 10	1 14		
AUSTRALIAN	1 17	2 15		1 15	2 5		
ASAFETIDA, cm. to fin ..	0 16	4 0		0 19	1 15		
BENJAMIN, 1st & 2nd ..	27 0	45 0		10 0	36 0		
Sumatra 1st & 2nd ..	6 5	11 5		6 10	15 0		
3rd ..	3 5	5 0		3 10	5 0		
COPAL, Angola red ..	6 0	6 15		6 0	6 15		
Benguella ..	4 0	5 0		4 0	5 0		
Sierra Leone, per lb.	0 6	0 10		0 7½	0 11		
Manilla	20 0	28 0		15 0	27 0		
DAMMAR, pale	66 0	75 0		54 0	60 0		
Singapore	65 0	74 0		48 0	58 0		
EUPHORBUM	9 0	15 0		12 0	20 0		
GALBANUM	0 5	1 3		0 6	1 6		
GAMBAGE, pkd. pipe per cwt.	200 0	240 0		200 0	240 0		
GUALACUM	1 3	2 6		1 0	3 2		
KING	40 0	50 0		40 0	50 0		
KOWHE, rough ..	25 0	40 0		30 0	49 0		
scraped sorts ..	42 0	55 0		50 0	60 0		
MASTIC, picked	4 0	5 0		4 0	5 0		
MYRRH, gd. & fine per cwt.	150 0	180 0		170 0	150 0		
ord. to fair	70 0	130 0		100 0	150 0		
OLIBANUM, p. drop ..	47 0	52 0		51 0	54 0		
amber & ylw. ..	42 0	46 0		45 0	50 0		
garblings ..	10 0	25 0		15 0	26 0		
SENEGAL	65 0	67 6		50 0	60 0		
SANDARAC	80 0	100 0		85 0	100 0		
SHELLAC, Orange ..	84 0	95 0		95 0	140 0		
Liver ..	75 0	83 0		90 0	115 0		
THUS	20 0	21 6		20 0	22 0		
TRAGACANTH, leaf ..	240 0	400 0		240 0	400 0		
in sorts ..	25 0	175 0		25 0	175 0		
OILS.							
	£ s.	£ s.		£ s.	£ s.		
SEAL, pale	33 10	34 0		33 0	32 0		
yellow to tinged ..	81 10	33 0		30 0	32 10		
brown	81 0	0 0		29 0	29 10		
SPERM	82 0	0 0		84 0	85 0		
BODY	0 0	0 0		0 0	0 0		
COD	37 0	0 0		43 0	0 0		

1877.				1876.				
Oils, continued:—								
	£	s.		£	s.		£	s.
WHALE, South Sea, pale, per tun	35	10	to	36	0		34	10
yellow „	83	0	..	85	0		82	0
brown „	31	0	..	0	0		28	0
East India, Fish „	26	0	..	0	0		26	0
OLIVE, Gallipoli „ per ton	48	10	..	49	0		45	0
Gloja „	48	10	..	49	0		44	0
Levant „	46	0	..	0	0		0	0
Mogador „	0	0	..	0	0		0	0
Spanish „	0	0	..	0	0		0	0
Sicily „	48	10	..	0	0		42	10
COCOANUT, Cochin „	42	0	..	42	10		39	0
Ceylon „	37	15	..	38	0		36	15
Mauritius „	38	0	..	38	5		29	0
GROUND NUT AND GINOELEY:								
Bombay „	0	0	..	0	0		0	0
Madras „	45	0	..	0	0		36	10
PALM, fine „	39	0	..	0	0		36	0
LINSEED „	28	15	..	0	0		23	10
RAPESEED, English, pale „	37	15	..	0	0		84	10
brown „	35	15	..	36	0		32	10
Foreign, pale „	38	10	..	39	0		36	0
brown „	0	0	..	0	0		0	0
COTTONSEED „	31	0	..	32	10		29	0
LARD „	48	0	..	0	0		58	0
TALLOW „	30	0	..	54	0		30	0
TURPENTINE, American, cks.	23	0	..	23	3		22	6
French „	0	0	..	0	0		0	0
PETROLEUM, Crude „	0	0	..	0	0		0	0
refined, per gall.	0	10½	..	1	0½		0	11½
Spirit „	0	9	..	0	0		0	9½
SEEDS.								
CANARY „ per qr.	48	0	..	54	0		100	0
CARAWAY, English per cwt.	40	0	..	0	0		0	0
German, &c. „	0	0	..	0	0		0	0
CORIANDER „	0	0	..	0	0		15	0
HEMP „ per qr.	33	3	..	35	0		40	0
LINSEED, English per qr. „	65	0	..	69	0		0	0
Black Sea & Azof „	52	0	..	0	0		48	0
Calcutta „	52	9	..	53	0		47	0
Bombay „	53	6	..	54	0		49	0
St. Petersburg „	52	0	..	0	0		0	0
Mustard, brown, per bsbl.	12	0	..	0	0		12	0
white „	13	0	..	16	0		13	0
POPPY, East India, per qr.	50	0	..	50	6		44	0
SPICES.								
CASSIA LIONEA „ per cwt.	48	0	..	60	0		47	0
Vera „	22	0	..	45	0		22	0
Buds „	73	0	..	74	0		75	0
CINNAMON, Ceylon:								
1st quality „ per lb.	1	9	..	3	8		2	1
2nd do. „	1	6	..	2	9		1	8
3rd do. „	1	3	..	2	3		1	6
Tellicherry „	2	6	..	2	10		2	9
CLOVES, Penang „	2	2	..	2	3		1	11
Amboyna „	1	4	..	1	6		1	5
Zanzibar „	1	1	..	1	2		1	1
GINGER, Jam., fine per cwt.	91	0	..	202	6		95	0
Ord. to good „	54	0	..	90	0		48	0
African „	29	0	..	0	0		83	0
Bengal „	23	6	..	24	0		28	0
Malabar „	30	0	..	30	6		30	0
Cochin „	53	0	..	115	0		50	0
PEPPER, Blk, Malabar, per lb.	0	4½	..	0	5½		0	4½
Singapore „	0	3½	..	0	3½		0	3½
White Tellicherry „	0	10	..	1	4		0	10
Cayenne „	2	0	..	3	0		2	6
MAICE, 1st quality „	2	0	..	3	0		1	11
2nd and inferior „	0	11	..	1	11		0	11
NUTMEOS, 75 to 60 to lb.	3	8	..	4	6		3	4
90 to 80 „	3	0	..	3	6		2	11
132 to 95 „	2	2	..	3	0		2	4
PIMENTA „	0	3½	..	0	4		0	3½
VARIOUS PRODUCTS.								
COCHINEAL—								
Honduras, black „ per lb.	2	5	..	2	9		1	9
silver „	2	4	..	2	6		1	7
pasty „	2	3	..	0	0		1	6
Mexican, black „	2	2	..	2	4		1	8
silver „	2	2	..	0	0		1	7
Teneriffe, black „	2	2	..	3	1		1	8
silver „	2	4	..	2	6		1	8
SOAP, Castile „ per cwt.	26	0	..	83	0		83	0
SOY, China „ „ gall.	1	8	..	0	0		1	11
SPONGE, Turk. fin. pkd. prlb.	0	0	..	0	0		12	0
Fair to good „	0	0	..	0	0		4	0
Ordinary „	0	0	..	0	0		1	0
Bahama „	0	0	..	0	0		0	6
TERRA JAPONICA—								
Gambier „ per cwt.	20	0	..	2	3		21	0
Free cubes „	28	0	..	29	0		27	0
Cutb „	23	0	..	24	6		23	6
WOOD, Dry, Bar „ per ton	£3	2/6	..	£3	5		£3	0
Brazil „	14	0	..	20	0		0	0
Cam „	18	0	..	32	0		18	0
Fustic, Cuba „	8	0	..	8	10		8	10
Jamaica „	5	10	..	6	0		5	10
Logwood, Campeachy „	8	15	..	9	0		9	0
Honduras „	6	10	..	6	15		7	0
St. Domingo „	5	10	..	5	15		5	10
Jamaica „	5	0	..	5	10		5	5
LIMA, first pile „	8	15	..	10	10		8	0
RED SANDRIS „	6	0	..	0	0		6	0



E. A. R.—Potted Meats in Tins for Export.—"Is the meat simply filled into the tins and soldered down, or is it necessary—after soldering down—to make a small hole in the top and boil in a water bath to drive out the air?" The chances are that cooked meat soldered into tins, without previous heating and expulsion of the air from the tins, will putrefy as quickly as in the open air, so that it is absolutely necessary to leave a small hole in the lid. The process, after soldering the lid on, is to place a large number of the tins in a steam bath so as to heat them considerably above boiling: when a brisk current of steam has been escaping for a considerable time a skilled workman manages in some way to stop the current, and at the same moment to close the hole with a drop of solder. This is a very delicate operation. The chief reason for the subsequent heating of the meat after it is enclosed in the tin is to kill all microscopical germs that may be clinging to it: the hermetic closing of the tin is for the purpose of excluding all fresh germs. If the meat could be freed and protected from germs in any other way there would be no need for the tins.

E. A. R. finds that "Ess. Coel made with equal parts of cochineal, snits of tartar, cream of tartar, and alum, with a small quantity of sugar, does not keep well, and the same if the sugar is left out. Can we help him to secure a clear, bright essence of good colour?" We should be inclined to omit the cream of tartar, put in its place an equal quantity of sugar, and boil briskly for some time. The best liquid cochineal we have ever seen was made by dissolving carmine in liquor ammoniac, in the proportion of 40 grains good carmine to 1 dram liquor ammoniac; boiling the clear solution until the ammonia is expelled, and diluting to 6 ozs. with distilled water. The colour was excellent, and the essence kept perfectly. If common carmine is used there is likely to be a slight deposit.

Storage of Turpentine.—**T. C.**, referring to the note of our Halifax correspondent, *Subscriber*, says that he has had a 200-gallon circular tin-ware turpentine cistern in use for more than thirty years, sometimes only partially filled, and "expects the only action upon it will be a coating of resin, the same as there is deposited on shop bottles in which it is kept." We quote our correspondent's own words.

Anomaly writes as follows:—"In Prof. Attfield's book, p. 332, he says, 'Good commercial acetic acid does not contain more than 1 per cent. water, corresponding to 84.15 per cent. acetic anhydride.' Is this not anomalous? If it contains 1 per cent. water one would think that the remaining 99 per cent. would be acetic anhydride." There is no anomaly here. If *Anomaly* will alter one word he will be quite right. The remaining 99 per cent. will be acetic acid. $\text{HC}_2\text{H}_3\text{O}_2$ is acetic acid; $\text{C}_2\text{H}_4\text{O}_2$ is acetic anhydride. Ninety-nine per cent. of acetic acid corresponds to about 84 per cent. of acetic anhydride; thus:—

$$\begin{array}{rcl} 2\text{HC}_2\text{H}_3\text{O}_2 \text{ molec. weight} & \dots & = 120 \\ \text{C}_2\text{H}_4\text{O}_2 & \dots & = 102 \\ \text{As } 120 : 102 : 99 : x. & & \\ x = \frac{102 \times 99}{120} = \frac{1683}{20} = 84.15. & & \end{array}$$

A Widow.—Your preparation is liable to medicine duty on two grounds: first, because you recommend it for the cure of certain ailments; and secondly, because you claim an exclusive possession of the secret of compounding it.

R. Inglis (Glasgow) wants a book on the wholesale manufacture of B.P. preparations. We have never heard of one. Can any of our readers supply us with the information?

Eblana (Dublin).—The best way of making peroxide of hydrogen is to suspend barium peroxide in a little water and add dilute sulphuric acid cautiously to neutralisation. We do not know of any easier way. The barium peroxide is made by heating baryta in a current of oxygen or air.

An Assistant (London) asks: Is it possible to make the following up without it separating? It is a hair restorer:—

Curd soap	3j.
Camphor	3j.
Glycerine	3iv.
Ol. ricini	3iv.
Ol. Cajuputi	5j.
Ol. lavand.	5j.
Ol. rosmarini	5j.
Liq. am. fort.	3iij.
Spt. vini rect. ad	3vj.

We do not think you can mix them without separation as the ingredients now stand, but try what effect is produced by soft soap instead of curd soap.

W. C. D. (Belfast).—The "Perfumer's Guide" gives the following formula for toilet vinegar:—

	Ozs.
Extract cassia	8
Extract orris	4
Esprit de rose triple	4
White vinegar	40

But this is so entirely a matter of fancy that **W. C. D.** had better experiment for himself.

Enquirer asked last month for the title of some work on the manufacture of British wines. We find that Messrs. Chapman & Hall published, in 1865, "The Art and Mystery of Making British Wines" (7/6), which we think will just suit him.

Lambda wants a formula for a dressing for kid-top boots to be used instead of blacking. We suppose this must be a roundabout way of referring to a polish for patent leather. If so, this will answer:—Dissolve 4 ozs. of gum arabic in $\frac{1}{2}$ pint ink. This should be rubbed together in a mortar with $\frac{1}{4}$ oz. treacle. When well combined, add 2 ozs. vinegar and 1 oz. each of spirit of wine and sweet oil.

Selling Proprietary Articles under Tariff Price.—**Mr. Barrow Evans**, of Derby, as owner of several proprietaries having a large sale, protests against the above system, and would "ask our Trade Protection Society (of which I am a member) to suggest that all makers of proprietary articles do agree not to supply any tradesman so underselling nor any wholesale house (without whose co-operation we are powerless) known to supply these persons, who, I feel, as a retail chemist and patent medicine vendor, are inflicting upon the trade a vital injury."

One Interested.—Prosecutions for infringement of the Pharmacy Act must be conducted by the registrar. If you are able to give him sufficient legal evidence we have no doubt you will have attention. Address, The Registrar, 17 Bloomsbury Square, London, W.C.

Mr. William Parke will observe that the case to which he directs attention has been prosecuted.

Toilet Powder.—We cannot undertake to say how public analysts or magistrates may read the Adnotation Act, but we do not think that many of the latter would convict if spirit of nitre of sp. gr. .850 were brought before them. In the case of acetic acid a similar remark would apply. Slight variations in strength must be expected, but the law ought to prevent direct dilution. (2.) The Inland Revenue Board have given express permission for the sale of Steudman's and Stedman's powders singly, provided they are taken from a duly stamped packet. (3.) We are not acquainted with "solidified balsam of copiba." Do you mean the resin? That is obtained by distilling off the volatile oil.

Q.—Tinct. *Phytolacæ* is a remedy used chiefly by the "Eclectics" of America. There is no recognised formula, and it is made variously from the root, leaves or berries of the *Phytolacca Decandra* (poke-root). The proper proportion would be about 2j. oz. to the pint of proof spirit.

Ignoramus.—Your preparation is unquestionably liable to the medicine stamp duty. The Act requires stamps to be affixed to all such preparations "exposed for sale," but we do not believe the Board of Inland Revenue would sanction a prosecution of a chemist for simply labelling some dummy bottles for his window. As you have been threatened, however, by an Excise officer, write to the Board at Somerset House and let us know the reply. The point is of some interest.

D.W.—We have heard that "Castor Oil Pills" have been selected for attack by the Hampshire public analyst. Such absurd precautions seem like attempts to bribe the Act of Parliament. If commenced, we should think the Chemists' and Druggists' Trade Association would be quite willing to defend a test case, and it will be time to look out for a new name for the pills when a conviction has been obtained.

J. L. (Chester).—Address any complaint of infringement of the Pharmacy Act to the Registrar, 17 Bloomsbury Square, London, or to the secretary of the Chemists' Trade Association, Birmingham.

Quid pro Quo (Aberdeen) asks, "Can a registered druggist of this country, emigrating to Melbourne, start business there without undergoing an examination?" Yes, as we understand the new Act, if he possess the Minor or Major Certificate of the Pharmaceutical Society, but not otherwise. He must pay a fee of two guineas for registration, and then has the same privileges as if examined by the Victorian Board.

Errors.—In our report of the Chemists' Trade Association meeting last month we attributed one speech to Mr. Skipper, of London, which should have been credited to Mr. Silpper.

In our first paragraph last month we erroneously implied that a lack of courtesy had been displayed towards the Committee of the Trade Association in not informing them of Dr. Lush's announcement of his intention to withdraw the obnoxious clause in his Medical Act Amendment Bill. This impression was conveyed by the elaborate explanations given in the Pharmaceutical Council. We discovered, however, soon after publication, that immediately after receiving Dr. Lush's assurance to this effect, Mr. Atkins wrote, not to Mr. Sandford only, but also to the secretary of the Trade Association.